The JOURNAL OF HIGHER EDUCATION

MAY
1948

VOLUME XIX
NUMBER 5

CONTENTS

THE CONTRIBUTION OF PHILOSOPHY TO EDUCATION 219
SCOTT BUCHANAN

This article is the text of an address which was part of a panel discussion, "The Contribution of Philosophy to Education," given before the 1946 winter meeting of the Eastern Division of the American Philosophical Association. Mr. Buchanan, formerly Dean of St. John's College, is Director of Liberal Arts, Incorporated, which was chartered for the purpose of starting a new liberal-arts college in Stockbridge, Massachusetts. Since the plans have been abandoned, the Corporation is now being liquidated.

AN EXAMINATION OF HIGH CLAIMS FOR PHILOSOPHY TODAY 222
CHARLES W. HENDEL

This article also is the text of an address which was part of the panel on which Mr. Buchanan spoke. A small part of this article also appears in Mr. Hendel's new book "Civilization and Religion," recently published by Yale University Press. Mr. Hendel is Professor of Philosophy, Yale University.

EDUCATION AT AMHERST: A NEW CHAPTER 227

The Journal has departed from its policy of not reprinting published materials in this instance. This article, describing the new curriculum at Amherst College, is a reproduction of a booklet distributed to head masters and principals of preparatory and high schools and the parents of students already enrolled in the College.

EDUCATION OF LEADING SCIENTISTS STEPHEN SARGENT VISHER 233

This article is an abstract of parts of the book, "Scientists Starred 1903–43 in 'American Men of Science,'" published last December by the Johns Hopkins University Press. Mr. Visher is Professor of Geography at Indiana University.

ON SIMPLICITY IN THINKING WARREN STAEBLER 239

Mr. Staebler in this article points up the dangers of obscuring thought by too much seeming erudition. Mr. Staebler is Associate Professor of English Literature at Earlham College and author of "The Liberal Mind of John Morley."

THE AIR UNIVERSITY JAMES C. SHELBURNE 244

The Deputy Director of the Educational Advisory Staff, Air University, describes the organization of the parts and the objectives of the educational system for officers arranged by the United States Air Force.

CONTENTS (*Continued*)

SPECTERS IN LIBERAL EDUCATION — MAURICE L. RIDER — 249

A Graduate Student in the College of Education, Ohio State University, here offers some criticisms of higher education.

WITH THE TECHNICIANS — 254

A Proposed General Course in Social Science, reported by Cornelius Willet Gillam, Professor of Economics, Carleton College; Spelling in College, reported by Arthur E. Traxler, Director of the Educational Records Bureau, New York; The Basis of Training for Personnel Work, reported by C. Gilbert Wrenn, Professor of Educational Psychology and Graduate Adviser in Personnel Training, University of Minnesota.

THE REPORTER — 262

Bequests to Harvard and Pennsylvania, new courses at Union and Wisconsin, competition for prize for best student-owned library at Smith, new gymnasium and student center at Northwestern, comprehensive examinations to be given pharmacy students at Minnesota, new course in practical agriculture for Greek students arranged co-operatively by several United States organizations, programs broadcast by Lowell Cooperative Broadcasting Council, honorary sponsoring committee appointed by Princeton for planning enlargement of its School of Public and International Affairs as memorial to Woodrow Wilson, Wisconsin seeking additional funds, Canadian campaign for $5,000,000 for educational aid to Europe, tuition-exemption plan arranged by Columbia, Delta Kappa Gamma award for work published by a woman, annual report of John Price Jones Corporation, grant by Rockefeller Foundation to Ohio State, agreement completed with China and Burma to put Fulbright Act in operation, new fellowships at New Jersey College for Women and Pennsylvania State, Educational Testing Service organized, three-year study of present-day revolutions undertaken by Stanford, Research Center for Group Dynamics to be moved from M. I. T. to Michigan.

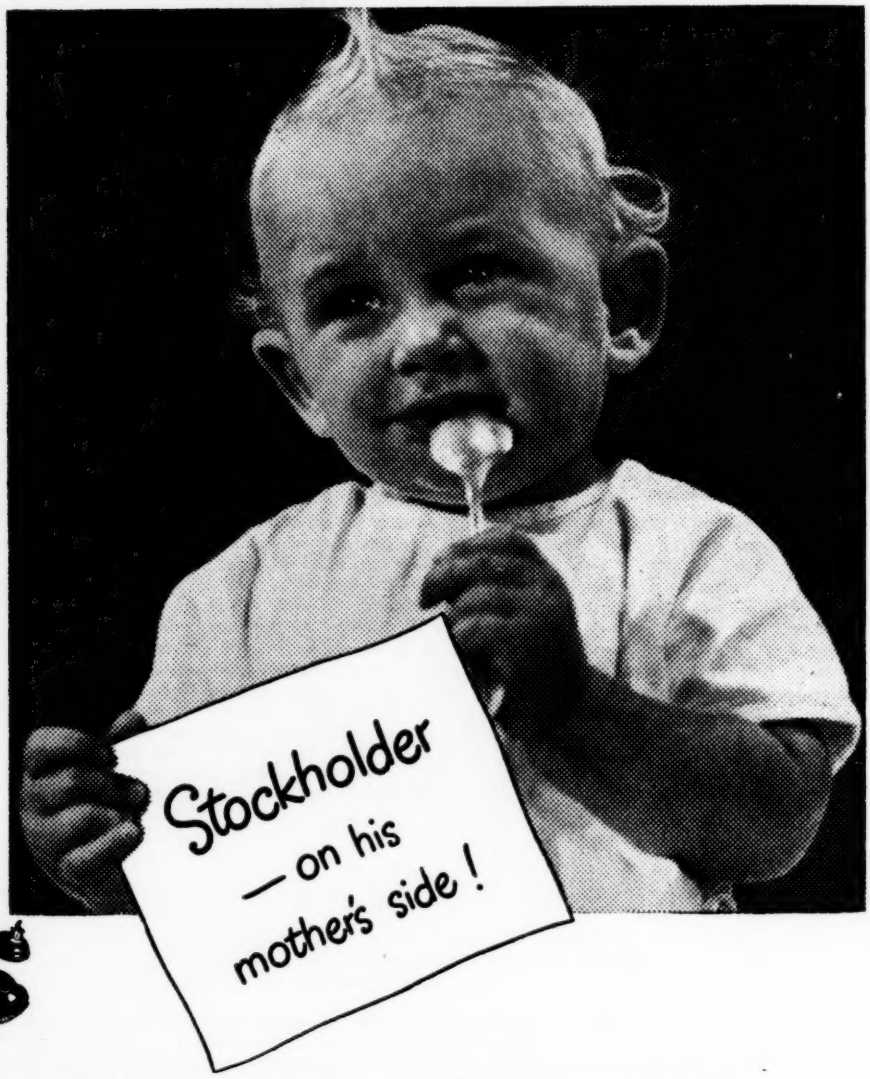
EDITORIAL COMMENTS — 266

REVIEWS — 269

"The University of Chattanooga: Sixty Years," by Gilbert E. Govan and James W. Livingood; "Introduction to Contemporary Civilization in the West: a Source Book," prepared by the Contemporary Civilization Staff of Columbia College, Columbia University; "Graduate Work in the South," by Mary Bynum Pierson; "The Chronicles of the Sesquicentennial," edited by Louis R. Wilson.

IN THE LAY MAGAZINES — v

THE JOURNAL OF HIGHER EDUCATION is published monthly, except during July, August, and September, by the Ohio State University; 50 cents a copy, $4.00 a year (Canadian and foreign subscriptions $4.50). The address of the editorial and business office is Bureau of Educational Research, Ohio State University, Columbus, Ohio. Entered as second-class matter October 12, 1939, at the Post Office, Columbus, Ohio, under the act of March 3, 1879.



THIS cute little fellow wasn't born with a silver spoon in his mouth but his mother is a stockholder just the same.

For she's one of the thousands and thousands of mothers — young and old — among the 390,000 women who are stockholders of the American Telephone and Telegraph Company. They outnumber the men!

They are women in all walks of life. The majority give their occupation as "housewife." Many others are teachers, nurses, stenographers, clerks and sales people.

Tens of thousands of girls and women who work for the Telephone Companies either own A. T. & T. stock or are buying it out of wages.

No other stock is so widely held by so many people all over America—and there are more stockholders now than ever before. The total exceeds 723,000.

So you can see that this is a business that is owned by the people. It was built by the savings of the many, rather than the wealth of the few.

BELL TELEPHONE SYSTEM

The Journal of Higher Education MAY, 1948

The Contribution of Philosophy to Education

By SCOTT BUCHANAN

Teaching Is to the Love of Wisdom as Education Is to Philosophy

I DIRECT this discourse mainly to what I consider the center of the subject suggested by the title. I want to propose an analogy: Education is to philosophy as teaching is to the love of wisdom. I want to substitute the second half of the analogy for the first half and discuss the relation between teaching and the love of wisdom.

A teacher, if he is worth his salt, needs and loves wisdom. If I had the space, I should like to discuss Plato's *Symposium* as a discourse on teaching and the pursuit of wisdom. Not the least of my points would be Plato's dramatic presentation of the varieties of teaching. I recommend a re-reading of that dialogue. I should like to suggest my own array of great teachers, with a few comments on each and some generalizations on all of them. My great teachers are Socrates of the Platonic Dialogues, Virgil and Beatrice of the *Divine Comedy*, and Christ of St. Augustine's *De Magistro*. I shall save my generalizations until later.

I realize that each of us has his own Socrates. Mine is always a teacher, seeking to pass, with his pupil, from opinion and belief to knowledge. His methods were imitated from the torpedo fish and the midwife, the posing of problems and the asking of questions. By shock he forced his victims to deliver themselves of opinions, ideas in embryo, and he invited post-parturitional judgment by the parent. Each delivery was thus a discovery, a reminiscence, a recognition, and a judgment. In these learnings there was always a final phase with two aspects, an insight and a confession of ignorance, a learning vector with direction, sense, and finite magnitude, and consequently the devastating irony of a tragedy, even in small comic matters.

Mr. Whitehead has remarked that

all European thought has been footnotes to Plato: but what footnotes! Dante's substitute teachers for Socrates are Virgil and Beatrice. Virgil's tough sympathetic guidance of his proud and faithful fellow traveler celebrates the magic transformation of the torpedo fish and the midwife into the poet. Virgil's magic is the glorious and terrible work of the intellectual imagination traveling the whole country of the mind and making the intellectual eye see, for itself, the idea in the image. Dante's pride falls, and he sees through his embarrassments. Virgil begs an insight and Dante sees a whole world.

Beatrice, Dante's Diotima, climbs Jacob's ladder of love, and the pupil is transported from idea through ideas to ideas in ecstatic circles of dialectic. This is the original language of inspirational teaching, of which the contemporary yen for inspiring personalities and the fine arts is a sad nostalgic echo. Beatrice by sheer intellectual light illumined her pupil, and both became ideas and intelligences. Beatrice had an inner light, and with it she kindled a light in Dante—and in us.

But the intellectual light in Beatrice is only a borrowed light, merely a light of ideas, fully aware, like Socrates, of its mediumship. Beatrice left Dante, and he in turn had to become blind in order to discover her source. Beatrice's resignation of her teaching authority was in behalf of truth, which her pupil must seek for himself at the top of the ladder. Plato and St. Thomas both destroy their writings and their reasonings for the same purpose.

This is the great mystery of teaching and learning. I hope no teacher will resent my turning to the literature of wisdom, St. Augustine, at this point:

> For do teachers profess that it is their thoughts which are perceived and grasped by the students, and not the sciences themselves which they convey through speaking? For who is so stupidly curious as to send his son to school in order that he may learn what the teacher thinks? But all those sciences which they profess to teach, and the science of virtue itself and wisdom, teachers explain through words. Then those who are called pupils consider within themselves whether what has been explained has been said truly; looking, of course, to that interior truth, according to the measure of which each is capable. Thus they learn, and when the interior truth makes known to them that true things have been said, they applaud, but without knowing that instead of applauding teachers, they are applauding learners, if indeed their teachers know what they are saying.[1]

This interior truth Augustine calls the Teacher, the Master, Christ, the highest names he can find. The modern teacher will be embarrassed with these names, but he will not, if he is a good honest teacher, try to find lower names for what he and Augustine recognize when they teach. However common or grand in origin the burden of teaching that we teachers bring, it is the spark that bursts into flame in the student's mind that gives it authenticity. I apologize for speaking in ancient parable. But it is a parable with modern meaning and with a modern moral of general import.

BY WAY of generalization, I should like to point out some common traits in these great teachers. I believe they are philosophical traits. They all know that truth is greater

[1] *De Magistro*, translated by George G. Leckie. New York: Appleton-Century Co., 1938. Chap. XIV.

than themselves or anything they know or teach. They admit, dogmatically if you will, that it is their business to seek truth, and, when they have found any trace or sign of it, to convey it through however low a medium, figments of imagination, or straws of doctrine. And with these shadows of opinion they also confess their own difficult knowledge of the ignorance that the shadows impose. In all this they are lovers of wisdom.

Furthermore, they trust the interior truth in each man to discover, to recollect, to recognize, and to judge what they offer. They are quick to recognize its appearance and operation, and they respect its authority. They trust each man to dispose what they propose. They go farther; they propose that each man shall gain enough insight and love of wisdom to become his own teacher. They pray that each man will become his own Socrates. They believe each man is a Silenus, unconsciously hiding within him a Socrates, a Virgil, and a Beatrice. Teaching is the art of waking and freeing these genii.

Armed with this wisdom about teaching, these teachers are not afraid of dogmas, disciplines, doctrines, sciences, philosophies, ideologies, and opinions. They love winds of doctrine because they bring the world to their understanding. They do not fear indoctrinations and authoritarianisms; they do not submit to them. Instead, they set their speculative minds as mirrors to reflect all sophistries and illusions as well as all ancient and modern truths, so that the pupil may find and measure himself there.

I conclude that these teachers have made contributions to philosophy; they have made me ashamed of my teaching profession, and of my own work in philosophy. Philosophers should be teachers to the world. We should be ready and willing to give advice on what all men should know. It seems to me time that we exercise the honest courage of our crafts. We speak for high truths, for difficult skills invented and improved in a long tradition, for institutions with high purposes. If we speak with the authority of our profession and with the understanding that knows its own ignorance, we need not fear that the modern student will fail to consult his interior truth and his inner light. If we do not speak out, we are neither teachers nor philosophers, but rather ideologists, purveyors of philosophies, and traders in human opinion. Men's minds are dark these days; teachers' and philosophers' minds are dark. Who dares bring light to kindle light?

An Examination of High Claims for Philosophy Today

By CHARLES W. HENDEL

Discussion of Matters of Utmost Importance to Human Life and the Community

WHEN we talk about education today, we speak of grand contributions from philosophy; the discipline of exact, systematic thinking, the interpretation of the meaning of life, the unification of knowledge, integration, synthesis. This is work to do so much more gratifying than the unconstructive cultivation of mere critical-mindedness that we are bounding with enthusiasm at our bright prospect. It has also caught the fancy of the educated world. The call is for the philosophical organization of knowledge. Eager to serve, and pleased with our new and significant rôle, philosophers are preparing to be the "organizers" of the thought of our time. If this could happen, it would be the knell of both philosophy and education.

When philosophers think seriously about education, and less about their own academic importance, they will not forget the insights of Plato or Locke or Dewey. For, like virtue, knowledge is something every man must actually achieve for himself. Knowledge simply cannot be handed to one person by another but must be won through an inner learning by the mind of each man. Locke's very broadside against supposedly innate principles was directed against an authoritative view of them which estopped men from looking for their own truth and making their own free decisions. In our time Dewey has reaffirmed this conception of individual responsibility in thinking. No one can assume this for anybody else. But nowadays, with all this talk about philosophy as providing integration, we are liable to this fundamental fallacy. It is one thing to plan an organization of studies as a curriculum and quite a different thing to make a real contribution to the development of a free, self-respecting mind.

When philosophers act their true part, they do as Socrates did. Allow that Plato's portraiture is idealized, still it is the true picture of a teacher. He is one who engages others in an examination of most important questions about human existence in such a manner that they all learn together what straight thinking is, while finding what the right decisions are. They thus learn both self-knowledge and a knowledge of something of universal value. This sort of learning is one of the best things of life.

This is great enough claim, and a sobering one. The philosopher as a teacher must live somewhat paradoxically. He has to do his work with the highest of aims for his philosophic

art but at the same time with the most modest claims for what he has himself. He sees ahead the priceless contribution philosophy can make to man's life, that perfection of knowledge which we call wisdom. If we could attain that, we should have what is most real and what is most worth while for man. But, in all honesty, we cannot pretend to possess this ourselves, much less to offer it to others. What, then, can one do?

First, have the faith of the dying philosopher of the *Phaedo*. Even if we are still only searching for a good that lies far ahead and is nowhere near our grasp, we are sure that such a love and pursuit of the Idea must yield the approximate benefits of wisdom, and that life in ourselves and others will gain in substance and worth. Surely we are on the right way with our philosophy.

Nevertheless, we are never at journey's end, as long as life lasts. Hence we should be wary of these present great expectations regarding philosophy, lest they tempt us to pretend to more than we have. We ought rather to profess ignorance, and really mean it, not just exposing others' ignorance—so easy to do—but our very own. Philosophy ought never to be other than an anxious business, as if we seriously feared falsity or wrongdoing in ourselves. One recognizes ignorance readily enough at the beginning of any inquiry but is quite apt to consider the penitent period happily ended when he has simply stopped thinking. Then we go forth self-assured, and tell the world. But surely Socrates' constant remarking on his own ignorance was not a mere literary trick. Such language is a humbling reminder to anyone who is in the rôle of master that even he does not know the answers, though he may be steering the argument ably enough through a good course toward its destination. A wise man will not assume that he himself ever knows any more than the others with whom he is dealing really understand; nor will he encourage them to believe in him rather than in the truth which lies beyond them all.

But is it not preposterous to recommend this sort of unfinished "knowledge" as a good thing in education? Can we afford to teach with such inconclusiveness? I answer with another question, Can we afford to say anything that is not true?

CONSIDER what philosophy is about and why it exists. We grapple with questions concerning which no man is wise enough at any time. They sprout out in the normal growth of human experience. We become aware of a difference between what we believe in science or in religion and what is right at hand, and so we must wonder about the question of truth. And what is that justice to which we appeal as a universal principle whenever another does injury to us, but whose value we are apt to relativize when we have to live up to it ourselves? What is the meaning of moral obligation? How are man's individual desire, self-interest, and freedom compatible with social duty and political authority? Are the values we now live by also lasting? Is there anything real that is lasting? Is there reason in the nature of things? Is there a distinctive nature of man not to be assimilated to the things of Nature? What is the meaning of Divinity? What are we to do when we have both belief and disbelief? Why does man torment

his mind so and try to decide such things? Who can ever know the truth about these questions?

Now, if we admit a continuing ignorance about them, we do run a great risk, especially today. For many voices would fain persuade us that these large questions about existence and value have no meaning nor any foreseeable answer. Why philosophy at all, in education or out of it?

But those who thus doubt philosophy seem to be out of touch with humanity, and insensitive to the desperate concern about these questions that have so mightily taxed, and at the same time developed, the powers of the mind for untold generations. Men will want to know and understand the world and themselves as well as they can. For all are concerned, as even Hume testified, in respect to religion: "We cannot restrain our restless inquiry with regard [to such questions]" in spite of the "doubt, uncertainty and contradiction."[1] That basic concern has sometimes been interpreted as a mere fear or a wish to escape reality, but in the supreme philosophers we perceive that it takes the form of a great courage and a daring to look death straight in the face. And besides this moral vigor there is also, in the making of philosophy, a speculative zest of the mind which is strong wherever there is such virtue.

GENERATIONS of youth go through a philosophic period of concern about these questions. They experience it in their own special way, because of their situation. For they are entering what seems to them a closed world where things are already settled. Just as they have to find their jobs in a vast system about which they have little or nothing to say, so they seem only to have a choice of intellectual positions already determined. They often wonder whether their very questions about life's values or the nature of reality or God are really the natural promptings of their own minds. Maybe they think about them only because of their moral upbringing or the conventions of their religion. Thus a clean sweep of the dominant notions seems often a refreshing breath of liberty. They sometimes welcome philosophy just for that cleansing. But then they hope, too, that with their minds really free they will gain an authentic knowledge and conviction.

What should be our educational approach to young persons who are in need of, and seeking, such freedom and well-grounded faith? Is it to come proffering doctrine or thought already organized? That catches them at their weakest point, their wholesale uncertainty, and seems to relieve them of it, but then they miss the experience of experiment and thinking. What they carry away may not have been proved in their own minds. Much greater doubts may crop up later, when the spell of formula has worn off and they have to live by the things they really believe. Is it not better for us, then, not to pretend to so much more knowledge than they have? Let them see us wrestling with questions too big for us, and as if our own lives were really at stake. That makes for a sense of fellowship which dissolves any initial suspicion of authority and opens the doors of mind

[1] *Dialogues concerning Natural Religion.* London: William Blackwood and Sons, 1907. p. 4.

and confidence. We shall all go exploring together, and we shall get much farther than by any mere argument with words. Whatever men come out with in that way of learning they will truly understand and believe, and they are more likely to act accordingly.

This may seem to be only advice about tactics in teaching. It is more essential than that. The way one teaches philosophy makes all the difference between a real contribution and none at all.

A. D. Lindsay, speaking of adult education in particular, said during a discussion at a bicentennial conference at Princeton:

> All true teaching depends on discussion in a group. We must see how to make live and real participation of students, not somebody teaching somebody else but citizens gathered together with one another discussing matters of the utmost importance to human life and the community.

This is the point, and the way we can make our distinctive contribution.

There were some lessons learned in teaching philosophy to men in the Army overseas. There are occasions when, cut off from all the familiar paraphernalia of the profession, we see the essentials of our vocation clearly. This was the experience of several members of the American Philosophical Association who went overseas to teach philosophy in Shrivenham Army University, set up for the instruction of the men of the Army prior to their redeployment shortly after V-E Day.

We had no idea what we could teach these men or what they would expect of us. We were conscious of our desperate ignorance both of the men and the large questions concerning human life which we, as well as they, have to face. In any case, these soldier students were men whose experience was considerably different from the experience of the students whom we ordinarily encountered in college. The typical G.I. was twenty-three years old, with fifteen months overseas service, representing all units. Old lectures would not do. The usual books were not available. We could only trust to our own profound interest in them and to what we ourselves had learned about teaching. One thing we counted on absolutely—the value of group conferences for discussion, in conjunction with lectures and reading. We arranged a number of courses on essential phases of philosophy, at great cost of thought, time, and energy. We learned day by day what the men needed and what they sought to know, men who had faced death and come out wondering and thinking. Their questions, we found, were the questions of philosophy with which we had always been wrestling, and concerning which great books have been written. We had enough literature at hand—some Plato, the *English Philosophers from Bacon to Mill*, and Castell's *Introduction to Modern Philosophy*, with its quotations from many thinkers—to be able to use the memorable statements of a question or argument. The men found their own groping thought made articulate in these readings. They studied them eagerly and discussed them in lively fashion. We teachers often had to transform our own thinking as we worked with them. Sometimes we were asked questions which we could not answer directly. We made a rule simply to admit our

ignorance and from there to follow the argument. The men were not impatient at not getting doctrines or solutions: what they demanded was a serious consideration of their problems and ideas. How many times we realized in these discussions that one breath of perfect honesty teaches more than all the sages can!

More important to you than my interpretations will be the testimony of the men themselves. Hundreds of men were studying philosophy in the program at Shrivenham. In the second term, 183 men were in the beginning class, encountering philosophy for the first time in their lives. At the end of the course, before they returned, most of them to their units in the occupation forces in Germany or Austria, many wrote me, telling both of their experience in the Army and the war and of what the eight weeks at the university had meant to them. Here is one man's statement:

Those of us who registered for the Principles of Philosophy did so because of many questions that plagued us, as they have all mankind, but we didn't want to let them go unanswered, and hoped that they'd slowly drop into oblivion; rather we hoped that a philosophy professor might be able to help us a little—at least we were willing to give him a chance. 'Twas a gamble and we played it, and at least for my part I can say I won. Our questions haven't been answered, but we've been shown leads that might help us, and more than that, we've been led to think a little deeper into the various questions.

I should like to add a quotation which shows a practical consequence of that method of proceeding with our students. It is evidence, I think, of the measure of their own self-knowledge or wisdom. Several men once asked how it was possible to reconcile the things they had to do in the war with the principles of Socrates as depicted in the *Apology* and the *Crito*. I tried to do this in a lecture, without being very sure myself, because I had not had their experience. I reasoned that they were acting as soldiers, officers of the state, and that the sole responsibility was not theirs. I feared that they might be obsessed with a sense of guilt. But, at the close, eight men walked up to the platform and, speaking respectfully but very earnestly, they said the following, which I wrote down immediately afterwards:

Please don't protect us like that. The awful thing about this war is the throwing over of all personal responsibility by individuals. Our men have not learned principles, and so they are very irresponsible in combat and in other actions. The most evil thing is to be divested of all personal responsibility.[2]

I count this as practical wisdom. They "had it in them," as Socrates would say, and it took only a little practice of the art of philosophy to bring it to the light of day.

[2]A more extensive treatment of this subject is presented by the author in *Civilization and Religion: an Argument about Values in Human Life* (New Haven, Connecticut: Yale University Press, 1948).

Education at Amherst: a New Chapter

A Description of the New Curriculum Prepared by the Faculty Committee

EARLY in 1945 two parallel and independent reports considering the postwar College were issued: *Amherst Tomorrow*, by a special committee of the alumni, and the report of the Committee of the Faculty on Long Range Policy. The alumni report was, for the most part, general in character, while that of the faculty was detailed and specific. When the two are compared, however, they show a remarkable degree of agreement on the type and kind of education that should be given at Amherst.

The purpose which guided the writing of both reports is well stated by President King in his letter instructing the faculty's committee:

> We all realize that the present emergency is likely to produce profound changes in our social fabric. These changes are likely to affect our program of higher education. It seems to me of vital importance that Amherst College should be considering now how best to adapt itself to meet the changed conditions. It may well be that we shall wish to make radical changes in our present practices and procedure. A study of these questions is the function of your Committee.
>
> Amherst College was founded in a time of profound national unrest. It has survived succeeding crises in our national life. It has adapted itself to meet conditions of each generation. I do not need to emphasize the seriousness of the problems which lie immediately ahead. I am confident, however, that with foresight and prudence and flexibility the College can adapt itself to serve with even greater usefulness the society of tomorrow.

Those recommendations of the Committee on Long Range Policy which dealt with the curriculum were fully discussed and adopted by the faculty. The new curriculum started with the class entering in the fall of 1947.

Amherst's new program of studies is, thus, the result of a process of deliberation in which alumni and the faculty have participated. What is this new program? What are the chief reasons for adopting it? What is it expected to accomplish?

Amherst has always been a liberal-arts college; there is no likelihood that it will change. Colleges like Amherst have an essential rôle to play in the total life of the community. Their function is to provide for the ablest of our youths the opportunity to enlarge their intellectual perspectives. The supreme aim of a college education is to promote the growth of generalization. It is, in A. N. Whitehead's words, "to enable you to shed details in favor of principles." An education of this kind aims at developing the

power of using abstractions in a way that will enable the individual to deal with a great diversity of experience. Under the conditions of modern life this has become more important than it ever was before.

If a liberal education is to be comprehensive, it should be organized in such a way as to unify the most fundamental cultural interests of the society in which we live. The curriculum should be organized around three basic foci of interest: the mathematical, physical, and biological sciences; history and the social sciences; and literature and the fine arts. The organization and exposition of subjects should be in terms of these great divisions rather than in terms of a number of diverse departments and a multitude of separate courses. Every student should be required to do at least enough work in each of these three divisions of the curriculum to give him the sense that he shares a community of knowledge and interest with all of his fellow students. Nothing is more in contradiction with the purpose of a liberal education than a curriculum composed of a large number of discrete and unco-ordinated courses, all treated as if they were of equal importance.

But the college can and should do far more than promote the mere acquisition of knowledge. It must also teach its proper use—that man's knowledge and skill are his only to serve the good, public and private, of the community. It is the intellectual life of the college as a whole, as a community in itself, which must insensibly convey this attitude. Every activity within the college, curricular and extra-curricular, will contribute to or detract from it. If the atmosphere of the college is false, one only learns there how to enjoy himself and exploit others; if the atmosphere is true, one may acquire by a sort of contagion a new attitude, the liberal attitude. For "in education it makes all the difference why a man does or learns anything; if he studies it for the sake of his own development or with a view to excellence it is liberal."[1] It is to foster this attitude that the new program was adopted.

The curriculum at Amherst has long been a conservative example of the usual pattern of organization in liberal-arts colleges. During the first two years the student was required to continue his general education by electing courses in each of the three broad fields of knowledge: mathematics and natural science; social studies and philosophy; and language, literature, and the arts. These "distribution" requirements being fulfilled, he was expected during the last two years to concentrate at least a fourth of his work in some department or in one of the existing interdepartmental "group majors." If a candidate for the "degree with distinction," he was required also to take a comprehensive examination in the field of his major and to submit a piece of laboratory work or a thesis (literally a "masterpiece") which would show his ability to continue his studies independently of his instructors.

This was generally considered, so far as the last two years were concerned, a good procedure. In particular, the existing requirements for a major and for the degree with distinction were sound in theory and operated well in practice. The real problem, it was felt, was to be found

[1]Aristotle, *Politics*, Book V, Chap. 2.

in the first two years. The distribution requirement did not really meet the demand for an adequate program of general education. This became more obvious, as departments were increased or new ones added and the number of courses multiplied.

WHAT then should be the student's general education during his first two years? Briefly, its purpose is twofold: first, adequate provision for the reinforcement of certain skills, particularly in languages and mathematics; second, the rounding out of the student's general education by the requirement of certain basic courses which will introduce more order into the work of the first two years and provide a body of common knowledge that will serve as a basis for later specialization in any particular field. Each of these basic courses will, so far as possible, provide an interaction and mutual reinforcement of information and skills. These courses will teach both methods, in an elementary way at least, and results.

How can this be done? Not by "survey" courses if those are superficial omnibus affairs. It can be achieved by a combination of the usual classroom procedures of recitations, lectures, and discussions with "laboratory" or "seminar" periods for small groups on the model or analogy of the usual courses in the laboratory sciences. These basic courses would be organized around certain broad topics or problems chosen for their value as means of introducing the students to the kind of work one does in that particular field. Apprentice training in this kind of work would be given in the laboratory or seminar sections; the comprehensive background for the work would be supplied by the lectures and the readings assigned in connection with them.

The natural sciences are taught with a full realization that it is not enough merely to rehearse what has already been done. The primary thing in science is the use of these results as a basis for further inquiry. Properly to educate a scientist one must instill this attitude from the beginning. This principle has likewise come to be realized and applied in every field of professional and technical training. The beginning law student or medical student is immediately confronted with cases or laboratory and clinical practice. In business and in government agencies likewise, the in-service training given the beginner immediately, or almost immediately, puts him to work on the details of actual affairs. He is expected to learn in and through working on the job. This is "realistic" education. The problems created by practical situations allow no bungling or inept solutions. They teach respect for consequences.

To emphasize practice in an introductory course is to give the subject greater meaning and vitality. It is to restore apprenticeship, which has always been the natural and effective relation of student to teacher, to all levels of college education. It is to give meaning to the abstract portions of a subject by relating them both to the experience of the student and to the concrete details to which those abstractions pertain—for we only understand the real meaning of a generalization in so far as we are able to perceive its specific consequences. It should be unnecessary to add that

this emphasis upon practice really makes education more liberal.

There does not seem to have been sufficient recognition in college teaching that if "learning through doing" is essential to the training of scientist or engineer and the business or professional man, it is equally important in the field of the humanities and social sciences. Because it is essential to the teaching of every subject, it should be a basic feature of all the general courses.

Certain additional assumptions underlying this program are:

First, that every student should have a good working knowledge both of his own language and of a language other than his own. In the case of modern languages this should include some speaking knowledge as well as a reading knowledge of that language.

Second, that it is essential for the student to be well grounded in the fundamentals of mathematics and the natural sciences.

Third, that it is essential for the student to know the background of "Western" or European civilization and also of his own; and that history and the humanities should be brought more closely together.

Fourth, that, in order to give these courses greater depth and comprehension, the college should shift from its present five-course schedule to a four-course program.

Acting on the basis of these considerations, the faculty has adopted for the first two years the following new program:

The Freshman-Sophomore Curriculum

I. First Year
- Science 1–2
- European Civilization
- English 1–2 and Humanities
- Foreign Language or Elective

Summer Reading Period

II. Second Year
- Science 3–4
- American Civilization
- Humanities—A course in one of:
  - *a.* Literature—English or foreign
  - *b.* Classical Civilization
  - *c.* Philosophy
  - *d.* Fine Arts, Music, and Drama
- Elective

It is proposed, then, that the student be required to take three two-year sequences: in mathematics and the natural sciences; in English and the humanities; and in history and the social sciences. The sequence course, Science 1–2, is a combination course in mathematics and physics in which the students are assigned to sections according to their previous experience. Likewise, in Science 3–4 in the sophomore year, the student has the choice of chemistry and biology or evolution of the earth and man. All of the specifically required courses in these sequences will be of the "laboratory" or "seminar" type. One of the elective courses in the sophomore humanities group, "Fine Arts, Music, and Drama," will also be of this type. These courses are concerned with very different subjects. What they have in common is that in each the two requirements—the acquisition of certain fundamental skills and the concern for a body of common knowledge—will determine their form and content. They will be organized around topics which are chosen because they exemplify the relations between parts of the broad area of knowledge with which the course deals, and because they are particularly suitable for illustrating the techniques or methods in that field.

These two-year sequences in mathematics and the natural sciences, in

European and American civilization, in the writing of English, and in literature, the arts, and philosophy are not conceived as the prescription of an ordained body of knowledge. This program is not framed on Mr. Dooley's principle "that it doesn't matter what you teach a boy so long as he doesn't like it," or even on G. K. Chesterton's "that if a thing is worth doing it's worth doing badly." It is proposed as a means of bringing the student into effective contact with all the broad fields of knowledge included in the curriculum.

Since the kind of work done in different fields varies greatly, there will be little uniformity in the character of the laboratories or seminars. In some courses the emphasis will naturally fall upon the acquisition of certain skills, while in others it will be mainly upon subject-matter presented in the form of topics or problems. Because the students are to be grouped in small laboratory or seminar sections, adequate consideration can be given to their differences in preparation, abilities, and interests. Under certain conditions, where it would be to his real advantage in terms of his whole four-year program, the student may be permitted to substitute other courses for one or more of these requirements. For example, students taking pre-medical work or the combined liberal arts–engineering program at Amherst and the Massachusetts Institute of Technology can get the preparatory courses they need. Each case of this sort will be considered on its merits. In every course the student will be working with a small group under the intimate supervision of his instructors. Much of that work will be individual in character. He will have the opportunity to progress as rapidly as his capacities and previous training permit.

Thus by the end of his first two years the student should have acquired a body of really common knowledge of the first importance, the kind of knowledge that will give him a broad basis for later specialization in every field of the curriculum, though he will, of course, normally specialize in but one. And in entering college he will have made an adult departure, for in the seminars and laboratories he will be engaged in the kind of projects that would naturally lead to honors work in the last two years.

EVERY student will have an opportunity during the first two years to demonstrate clearly whether or not he is willing to do and capable of doing honors work. Many students, and everyone can think of examples, succumb to a routine of "lessons." They do not discover what real college work entails until they take more advanced courses or commence doing individual work for honors. The introduction of an "honors" type of work into certain courses at the outset should awaken their interest and avoid a good deal of this educational waste. More students should become able to do "distinction" work as a result, and it is expected that an increasing number will.

The plan of work for the last two years is substantially what it has been. Each student will devote a half or more of his time to a "major" which he will pursue under the direction of a department or of the teachers in one of the interdepartmental "group majors" such as "American Studies." As part of the requirements for this

major he will work in small advanced courses in his chosen field. In order to ensure that the student continue his general education during the last two years and does not concentrate his work exclusively within one division, he must take at least a fourth of his work outside the division in which he is majoring.

If he is a candidate for the degree with distinction, the student may, at the discretion of the department, substitute in his junior year a conference or tutorial course for one of the four regular courses required. In the senior year he may take only two regular courses, devoting the rest of his time to individual work in a laboratory or on a thesis under the guidance of the teachers in his department or group. At the conclusion, what honors he receives will depend upon his achievements in courses, in a comprehensive examination which tests him upon the whole field of his major irrespective of the courses he has taken, and upon the quality of his thesis.

This, in brief, is the Amherst curriculum. While it is a delightfully utopian task to construct a curriculum, such schemes are a plan for *Erewhon* without the teachers to carry them out. It is no solution of the problem, however, to say, "Aren't good teachers enough?" Of course good teachers and good students may achieve some of their objectives under almost any conditions. The point in trying to organize a satisfactory curriculum is to make the conditions as helpful as possible.

It is virtually impossible for anyone to be a good teacher in a liberal-arts college who is not actively engaged in enlarging his knowledge of his subject, and who does not likewise possess the cultivation and breadth of interest which will enable him to be sympathetically conversant with the intellectual pursuits of many of his colleagues. The Amherst program requires men who can cross over departmental and even divisional lines to teach in the general courses and in the group majors. It also requires that these men be able to guide their advanced students when they are venturing out where the frontiers of knowledge are being extended. There will always be those who are primarily interested in their teaching as teaching and those who are more interested in scholarship and research. The rarest and best individuals are those who have the energy and ability to combine both. All of the best colleges have aimed at getting as many of these as possible. There are never enough of them to go round. It is the peculiar merit and also the greatest difficulty of this new program that it demands teachers (and students) of the highest quality for its effective realization.

Given this program together with the students and the teachers fit for it, what may one hope will be the result? There have been many attempts to define the liberally educated man, but none better than Milton's: "I call, therefore, a complete and generous education that which fits a man to perform justly, skillfully, and magnanimously all the offices, both private and public, of peace and war." Under the conditions of modern life it has become more important than ever before that individuals be able to comprehend intelligently as much as they can of our enormously

[*Continued on page 273*]

Education of Leading Scientists

By STEPHEN SARGENT VISHER

Summarizing the Replies Received from Scientists Starred in "American Men of Science"

IN ONE or more of the seven editions of *American Men of Science* (1906–44), 2,607 scientists have been starred as especially distinguished in scientific research. The voting was by secret ballot of the more active workers in each of twelve sciences—anatomy, anthropology, astronomy, botany, chemistry, geology, mathematics, pathology, physics, physiology, psychology, and zoology. The available biographical material on these scientists has been supplemented by 906 replies to a comprehensive questionnaire sent in November, 1946, to the living starred scientists whose addresses were available. Nearly two-thirds responded and many sent supplementary information. Most of these scientists obviously desire to assist in an effort to learn what conditions are conducive to scientific achievement.

The questionnaire asked how significant the scientists considered their pre-college academic training. Roughly equal percentages considered it had contributed much, moderately, or little (31, 33, and 36 per cent). One-sixth reported that their decision to specialize in the science in which they were later distinguished was greatly influenced by one of their high-school teachers. These teachers were somewhat more influential than the scientists' fathers (16.5 *vs.* 15 per cent) in shaping their choice, and distinctly more than their mothers (10 per cent), but high-school teachers were much less influential than the college teachers (42.5 per cent). High-school teachers had slightly more influence, according to these returns, than the combined influence of all other persons except parents and college teachers (16.5 *vs.* 16 per cent). In the sciences chosen, college teachers were most significant for 41 per cent, parents for 23, high-school teachers for 16, all other persons combined for 20. Somewhat surprising is the fact that 7 per cent report that a pre-college teacher notably stimulated them to later high achievement. Thus, nearly half of the distinguished scientists who acknowledged the notable influence of a pre-college teacher reported that the influence continued to be significant for them far beyond the decision to specialize in a particular science.

Of those who notably stimulated the scientists to high achievement, only their college and postgraduate teachers and their parents and wives were judged more significant than their high-school teachers. The percentages were 28.5, 25.5, 10.5, 10, and 7, respectively. Next most significant was the influence of a co-worker (5 per cent), a friend of about the scientist's age (4.5), an older friend (3), some other

relative (2.5), and an eminent scientist not known personally (2.5). One per cent stated that their own students had notably stimulated them to high achievement. The questionnaire requested a double check of the person who was most important in stimulating the scientist to high achievement. Pre-college teachers got 5 per cent of the double checks, college and postgraduate teachers 61, parents 11, wives 8, co-workers 5, friends 5, relatives other than parents 3.

ALTHOUGH more than a hundred starred scientists did not obtain college degrees, including some of the most eminent (Alexander Graham Bell, Thomas A. Edison, Albert Einstein), nearly all of them were college graduates. Several significant deductions appear justified by the available evidence on collegiate training. The college contributed much to 62 per cent, little to only 8 per cent. Some college teacher significantly influenced 41 per cent in choosing their life work, and notably stimulated 25.5 per cent to subsequent high achievement. Indeed, 20 per cent of the scientists report that a college teacher was most important in this respect, more influential than parents or wife (11 and 8 per cent) or than all other persons except a postgraduate teacher (41 per cent).

The academic years contributed to the scientists' achievement in several ways. The most important influence was the establishing of high ideals, including the stimulation of ambition, reported by about half of the scientists. The learning of methods of work came next, and the opportunity of following good examples and the learning of facts each were reported by about one-fifth. The questionnaire requested a double check for the influences judged most important. Forty-four per cent double-checked the establishment of higher ideals plus the stimulation of their ambition. The influence of example was double-checked by 22 per cent, methods by 18 per cent, and facts learned by 15 per cent.

For most of the scientists, their college training was cultural rather than narrowly scientific. The evidence for this inference, in addition to statements on the questionnaires, is gathered from data regarding election to Phi Beta Kappa and from a special study of the undergraduate records of the subsequently starred alumni of three representative institutions (one in the East, one in the Midwest, and one on the Pacific Coast). The assumption that most of the scientists received cultural rather than narrow scientific training is based in part on what the scientists considered the chief significance in their academic training, and in part on the statements by many mentioning the desirability of broad training.

A check of the Phi Beta Kappa *General Catalog, 1776–1922*, indicated that 441 of the scientists starred in the 1921 edition of *American Men of Science* were members, while only 198 starred scientists who graduated from colleges having chapters failed to win the golden key. Many of these latter were in attendance for only one year at the institutions from which they were graduated, and hence normally were not eligible. Others received the B.S. degree in institutions in which only Arts graduates are eligible for Phi Beta Kappa. It thus appears that the one-tenth of the men con-

spicuous for high general scholarship as undergraduates contributed more than twice as many distinguished scientists as the nine-tenths of the graduates of these institutions who were not conspicuously good all-round scholars.

The check-up of the undergraduate records of individual starred alumni in the institutions studied indicates that, with few exceptions, their training was notably broad. At the eastern institution (Wesleyan),

> in general they took an appreciable amount of science but one is impressed with the breadth of it, and with the amount of mathematics that went with it. When these men were here, science and its various branches were in the hands of a few men of exceedingly broad training. The result was that the title of the course meant very little, since the particular persons who taught them were apt to take students all over the scientific map.

At Indiana University, also, in the few years when many alumni subsequently starred were undergraduates, the training by the successful teachers was broad. The emphasis was on opening vistas and encouraging the students to high achievement rather than on routine instruction. Most of the subsequently starred scientists were such excellent all-round students that many of them were elected to Phi Beta Kappa when the chapter was established. In the western college (Pomona) the emphasis has been upon obtaining a broad foundation.

MOST of the scientists were graduated from colleges which at the time had relatively few students. In proportion to their enrollments, the large institutions yielded few, several of them not one, subsequently starred scientist per five-thousand graduates. The numerous teachers' colleges, agricultural colleges, and Catholic institutions also yield very few.

Although a score of well-known colleges graduated a considerable percentage of the total, many came from lesser institutions (a total of 263 colleges have at least one starred alumnus). This suggests that college prestige, wealth, and laboratory equipment are far less significant for a university than the possession of teachers who are highly stimulating to the more promising students.[1]

Notable variation occurs in the number of collegiate alumni who subsequently won stars in all of the institutions with several such alumni. Of the distinguished scientists graduated from each of the following institutions, the number graduated within one especially fruitful half-decade is given in the following table:

	Number of Starred Scientists	Number Graduated in One Half-Decade
Beloit	10	4
Brown	25	7
Dartmouth	22	5
DePauw	12	4
Indiana	31	13
Johns Hopkins	53	15
Kansas	28	8
Minnesota	36	10
Missouri	20	7
Nebraska	30	8
Oberlin	19	5
Ohio Wesleyan	12	4
Rutgers	11	4
Stanford	34	11
Texas	13	5
Washington (St. Louis)	13	5
Wesleyan	25	8
Wisconsin	43	9

Thus, in some schools a third or more were graduated in a single half-

[1] The teachers named by the scientists as especially significant in their own development are listed by science in the volume here partly abstracted. There also are listed by institutions the name and date of graduation of each of the starred alumni (*see* Stephen Sargent Visher, *Scientists Starred in 1903–1943* in *American Men of Science*. Baltimore, Maryland: Johns Hopkins University Press, 1947).

decade; in others, one-fourth. The especially productive half-decades occurred at different times: in the late eighties at Cornell, Denison, and Northwestern; in the early nineties at Columbia, Johns Hopkins, Michigan, Minnesota, Pennsylvania, and Yale; in the late nineties at California, Harvard, Stanford, and Wisconsin; early in the first decade of the present century at Chicago, Indiana, Ohio State, and Texas; late in the first decade at Dartmouth, Missouri, and Nebraska; early in the second decade at Brown and Kansas; late in the second decade at Princeton and Washington (Seattle); in the early twenties at Washington (St. Louis); in the late twenties at California Institute of Technology.

For each of the twelve sciences in which distinguished scientists have been starred, the number of collegiate alumni who were starred in the early years has been compared with the number of those starred recently. The institutions showing recent gains and recent declines are listed in Table I.

Confronted with such data as the table shows, revealing sharp fluctuations from time to time in the number of their collegiate alumni who were subsequently starred, most of the presidents of these institutions, or the deans to whom they referred the matter, either stated that the causes were unknown or that the gains or losses followed changes in the faculty.

Obviously, the causes of the fluctuation are complex, and checking them is not easy. However, at least three ways of improving the situation come to mind. First, more effective encouragement of the exceptionally stimulating teachers is desirable, especially in high-school and college, where most students choose their life work. Second, it is clearly desirable to increase the number of enthusiastic college science teachers and

TABLE I

UNIVERSITIES SHOWING RECENT GAINS AND DECLINES IN CERTAIN SCIENCES

	Recent Gains	Recent Declines
Anatomy	Cornell, Johns Hopkins, Washington (St. Louis)	Chicago, Michigan, Pennsylvania, Toronto, Yale
Anthropology	Chicago	
Astronomy	California, Toronto, Virginia	
Botany	Chicago, Michigan State, Pennsylvania, Wisconsin	California, Syracuse, Wabash
Geology	California, Chicago, Johns Hopkins	Amherst, Beloit, Columbia, Cornell, Harvard, M. I. T., Wisconsin
Mathematics	Brown, California	Columbia, Cornell, Michigan, Wisconsin
Pathology	Ohio State, Princeton	Johns Hopkins, Michigan
Physics	California, Chicago, Minnesota, Stanford	Columbia, Harvard, Johns Hopkins, Yale
Physiology	Chicago, Illinois, Michigan, Wisconsin	Johns Hopkins, Yale
Psychology	Illinois, Columbia, Michigan, Pennsylvania	
Zoology	Amherst, Cornell, Stanford	Harvard, Kansas, Michigan, Pennsylvania, Williams, Yale

facilitate their working closely with their most interested students. This entails small classes for those especially interested, and considerable individual, informal instruction. Third, since many potential scientists fail to develop because they are not adequately recognized and encouraged, the development and use of tests to learn what qualities the students possess and what ones are needed for success in science are highly desirable. Occupational guidance and the awarding of aids to exceptionally qualified persons should follow.

NEARLY two-thirds of the starred scientists obtained doctorates (not honorary) from American universities, about one-seventh received them abroad, and about one-fifth had none. The percentage without a doctorate has declined from about one-third for the 1903 starring to about four per cent in 1943. The number received abroad has declined sharply; for the 1903 starring, about one-third of the native Americans had foreign doctorates; for the last two starrings, almost none. More than half of those with American doctorates received them at one of four universities: Harvard, 274; Johns Hopkins, 238; Chicago, 194; and Columbia, 175. Other high universities were Yale, 114; Cornell, 89; California, 72; Pennsylvania, 67; Princeton, 57; Michigan, 44; Wisconsin, 43; Minnesota, 27; and Illinois, 26.

The record by decades shows that Johns Hopkins led in the doctoral training of these scientists from 1880 to almost 1910. Harvard was first in the 1870's and from 1910 to 1930, second in the 1880's and 1900's, third in the 1890's. Columbia was second in the 1890's, fourth in the 1900's, third in the 1910's, tied for fifth in the 1920's. Chicago was fourth in the 1890's, third in the 1900's, second in the 1910's and the 1920's. California was third in the 1920's. Yale was second in the 1870's, fifth in the 1890's and 1900's, tied for fifth in the 1920's.

During their most productive decade, the colleges and universities listed conferred the following number of doctorates upon scientists subsequently starred: Johns Hopkins, 83; Harvard, 74; Chicago, 68; Columbia, 55; Cornell, 36; California, 31; Yale, 28; and Princeton, 21. These best decades came at successively later, partly overlapping, dates in this order: Johns Hopkins, Cornell, Yale, Chicago, Harvard, California, Princeton, Stanford, California Institute of Technology, Massachusetts Institute of Technology, and Wisconsin. Severe slumps occurred in the following periods, approximately: in the 1890's, at Princeton and Michigan; in the 1900's, at Clark, Cornell, Pennsylvania, and Wisconsin; in the 1910's, at California, Stanford, and Yale; in the 1920's, at Columbia. Severe slumps are not evident at Chicago, Harvard, Johns Hopkins, Illinois, or Minnesota, although each of them did distinctly better in their best decade than in their poorest. The fluctuation from year to year in the number of the doctoral alumni who subsequently won stars varied in the different sciences.[2]

In brief, it appears that success in the doctoral training of potentially outstanding scientists is facilitated by presidents who actively appreciate superior teaching; professors who are widely known for effective presentation and for interest in their students

[2]Details are given in Visher, *op. cit.*

and in research; professors who are relatively close to their students in enthusiasm and vigor and are willing to work with them as partners; the availability of essential facilities and financial aid, so that the professors and students are not seriously handicapped financially or unduly annoyed in these respects; the presence of a group of students actively interested in research, not primarily concerned about "landing a good job"; and the presence of an atmosphere or spirit of confidence in the future of the student and of research, with a minimum of pessimism, sarcasm, or belittling of earnest effort.

Few of the one thousand scientists starred in 1903 had postdoctoral training but, of the five hundred who were starred in 1937 or 1943, half or more had taken postdoctoral work in three-fourths of the twelve sciences, including nearly all of the anthropologists, pathologists, and psychologists. In the sciences (geology, astronomy, and botany) in which fewer than half held postdoctoral fellowships or assistantships, many were employed by the United States Geological Survey, astronomical observatories, or in botanical research, each of which types of employment afforded valuable training somewhat comparable to that given for postdoctoral fellowships. The questionnaire returns reveal that all of those who had postdoctoral training considered it distinctly helpful, 85 per cent highly beneficial, and the remainder moderately beneficial.

In the questionnaire returns, many of the scientists reported on the relative amounts of training which they had had in various fields of learning, and indicated whether they recommended to their students that they take more, or less, or about the same amount of training in these fields. Impressive is the fact that 98 per cent recommended that their students take more physical science (including mathematics), 92 per cent recommended more training in the biological sciences, 89 per cent more foreign language, 80 per cent more fine arts, 77 per cent more earth science, 74 per cent more of the humanities, and 68 per cent more social science. It is evident that these scientists recommend that their students obtain a broad education. A large majority (87 per cent) recommended that four full years be spent in college, and 90 per cent recommended that more than three years be spent in postgraduate study. They made numerous other interesting suggestions, among which were to persevere, to encourage curiosity, to present findings effectively, and to cultivate the friendship of fellow scientists by co-operating with them and by being appreciative.

On Simplicity in Thinking

By WARREN STAEBLER

An Argument against Technical Vocabularies

SOMEWHERE in the story of his education, Henry Adams tells why he abandoned the effort to base every decision on all the facts underlying it. It was impossible, he had come to realize, to find all the facts relating to a single human situation and, in addition, even if one could, he would discover that the relations among them were infinite, and so would be less able than ever to make up his mind about them.

The disparagers of simplicity-in-thinking are persons who pride themselves on their awareness of complexity-in-fact. In their sight, complexity is all-important and no sound thinking can be done by anyone who is not continually conscious of it. The intellectual simplifier, they maintain, is vicious because he misrepresents things as they are. He has been frightened by a sense of reality disturbingly different from his preconceived notion of its simplicity, and so he takes refuge by burying his head ostrich-like in wishful thinking, prejudice, and superstition, all of which enable him to explain the world as easily and simply as when he was a child. Such an individual, perplexed by differences in color, creed, and economic standing in those about him, becomes the Negro-hater, the Catholic-baiter, and the capitalist-damner. He often lives in a world of elementary, violent antitheses: either one is white and superior or colored and inferior; either one is a Protestant and a believer or a non-Protestant and a heathen; either one is a worker and honest or an employer and dishonest. For him there are never more than two sides to any question, and the side on which he stands is always right. Thus he escapes the necessity (often painful) of thinking about difficult issues in life and vindicates himself at every turn.

On the other hand, it is just as easy to take refuge in the complexity of things. It is a temptation, particularly if one is a scholar or teacher, to absolve oneself of the responsibility of making up one's mind about anything consequential by shaking one's head and sighing how complicated it all is, how much more time and thought are still needed, and how many more facts must still be gathered. If he is a teacher of literature, he may pleasurably feel himself like Hamlet, irresolute through too much thought. To escape the remembrance of death, the simplest and commonest of all the facts of life, do we not give ourselves to the countless distractions of daily activity? Multiplicity is often a blessed haven.

There are, then, two kinds of simplification: one born of fear and the product of bigotry and wishful think-

ing, which is not thinking at all; the other the result of a determination to see things steady and whole, and the fruit of genuine, discriminating thought. Simplicity in thinking is imperative if we are to see life in any perspective and attain any mature understanding of its larger issues. But we are afraid of it because the conclusions to which it leads us trouble our minds and as often as not demand fulfillment in action which we lack the courage to undertake.

IN SCHOOLS everywhere, it is the teacher's duty to show students what, in the subjects they are studying, is significant and pertinent to life today. All that is not must be shown to be machinery. Latin verbs and nouns are not in themselves important, but only means to an understanding of an oration by Cicero or an eclogue by Virgil. It is the idea in any piece which is valuable, and as soon as it is grasped and its relevance to life, if any, seen, the verbs and nouns must be dismissed from the forefront of our minds; if they are allowed to remain, they become impedimenta by which our growth is stunted.

The study of race, for example, necessitates reading in several branches of learning and familiarizes a student with a whole new vocabulary; he learns to use such words as *anthropology*, *sociology*, *milieu*, *criteria*, *genes*, *chromosomes*, *Mendelian law*, and *cephalic indexes*. These are all only terms, yet too often what he knows does not rise above them; he parades them and shows by his glibness that he is aware of the complicated interrelations in his subject. The end of all his learning, however, the tragically important and simple conclusion to which he should have penetrated (or been led by his teacher), he often either does not see or cannot bring himself to admit; it is simply that there is no superior race, and therefore no ground on which to despise or hate a Negro or Japanese because either is, in his humanity, essentially like each of us and is our neighbor. It takes some courage to admit this, because a corollary necessarily follows—Christ's dictum, "Love [at any rate, respect] thy neighbor as thyself." This in turn entails action, and to act on such an issue may prove to be embarrassing, if not dangerous. It means, at the least, giving up one's seat on the trolley to the old Negro grandmother, tired from a day's scrubbing and burdened with a full shopping bag, rather than to the trim-legged, tight-skirted young white stenographer; and at the most, perhaps, it means taking into one's house, at least temporarily, the Japanese-American family who are being driven by patriots out of the one hundred–per cent American community to which they were sent to relocate themselves.

The simplification of the unintelligent man on the racial issue is not only unsound; it entails no ethical action. He sees that the Negro, for example, is of a different color, that he lives in a hovel and dresses, speaks, and works more poorly than the white man; and he knows that he came from Africa, a land of jungles inhabited by apes. The Negro is therefore, as both his origin and social behavior prove, inferior.

In a sense, education is only learning bigger names for small things, and we are too prone to forget this. The child growing up must learn to

exchange words of one syllable for those of three or four. Particularly where his bodily functions are concerned is this true. If *spit* is indeed a horrid word, what can be said of *puke?* Adults *expectorate* and *vomit*, or, more politely still, *regurgitate*. As youngsters, we "get along in a place"; as grownups, we "adapt to an environment" and make studies of our own "ecology." Much of the mystery of medicine derives from the use by even the smallest small-town practitioner of impressive, long Latin words. But we like show and do not want our illusion of our bigness and importance shattered. Thus the great amount of mumbo jumbo in our education is treasured and handed down from generation to generation. The littleness of things is obscured where it is not forgotten altogether. Samuel Johnson once reminded Boswell that "nothing is too little for so little a creature as man." And so, although with his fondness for long words he could define (half amusedly, one suspects) a net as a "series of reticulations and decussations with interstices between the intersections," he could also pride himself on his ability to talk simply with children and answer their questions clearly where some of his contemporaries could not.

As a college teacher myself, I know how hard it is to resist the urge to use big words and emphasize the complexity of things. To "point out the almost innumerable facets of a subject," to "call attention to the many factors inhering in a situation" is to go about one's task "scientifically." After all, one is teaching in an institution of higher learning, and higher learning, many people feel, must have a certain air about it (in other words, must be pretentious) or else it is no different from lower learning. Students often expect pretentiousness. They often like to be awed by pedantic jargon and can be downright disappointed if they do not get it. They consider themselves neophytes and insist on their professors being hierophants. On a certain campus, a former faculty member is still something of a marvel to certain students who remember him because his vocabulary was so extraordinary that not a word of his first lecture in economics, elementary as it was supposed to be, was understood by a single student who heard it.

Occasionally, an expert or administrator is honest and brave enough to decry obscurantism. Recently, Dean Christian Gauss of Princeton, talking before a group of educators on "effective teaching for democracy," stated bluntly a simple and elementary truth:

> We do not need, on the school and college level just now, more research into democracy or even into American civilization or American history. The truths of democracy are not difficult to understand. They are only difficult to practice. They are the very simple truths of the Christian religion, the brotherhood of man, and the social ethic which this involves.[1]

This is an important statement, not only because it says we do not need more truths or more wisdom in order to understand those we already have, but because it reminds us that where living is concerned, the vital things are the simple things, and that the simple things, because of their primacy, are far from easy to practice. For Dean Gauss, an ounce of practice in a teacher is worth a pound of pre-

[1]Quoted in *Princeton Alumni Weekly*, June 6, 1947.

cept; and rightly so. As John Morley said, seventy-five years ago,

> The leading of souls to do what is right and humane, is always more urgent than mere instruction of the intelligence as to what exactly is the right and humane.[2]

I know that there are eminent figures in American education, Mr. Hutchins, of Chicago, for instance, who do not share this point of view. They are often described as "leaders of thought," but they are, more aptly, only revealers. They aim only to "point up" issues of the day and then leave the student to make up his own mind about them; they do not believe in exhorting young people to take any particular stand on any matter, let alone in leading them to do what is right and humane on a serious moral issue by setting an example themselves.

WE NEED to remember continually, where ideas and conduct are concerned, that "simple" and "difficult" are synonymous rather than antithetical. One reason that some intellectuals are contemptuous of simplicity-in-thinking is that they unintelligently take "simple" to mean "easy," as unfortunately it often does in loose colloquial usage. It is not easy, it is hard, to think simply, to penetrate the cluster of subordinate technicalities to the heart of a matter; and it is hard to act on the simple central principle after it has been disclosed. I have disgruntled students by telling them that the stock of ideas to which they have already been exposed is sufficient to enable them to live satisfactorily and help improve society. I have also displeased them by maintaining that although in order to cross a hundred yards of dense forest they may have to fell a hundred trees and three hundred bushes and vines (not an easy task), what they have accomplished is very simple: they have moved their bodies three hundred feet, from one spot to another, an act which can be represented on paper by the drawing of a single line.

Teachers of literature must remember that the humanities should humanize, should promote humanity; and so they must hold of more consequence than their scholarly paraphernalia the human truths or human lies embodied in the works they read with students. The historical plays of Shakespeare are an interesting example in this connection, particularly *Henry IV* (Parts I and II) and *Henry V*, designed to glorify the ancestors of Queen Elizabeth and celebrate the military achievements of England. They are a superb illustration of the juvenility of chivalric "honor," of nationalistic tribalism—of man's inhumanity to man, in short. And it is these things with which students should come to grips, rather than the complicated family relationships among the various nobles, the use of the monologue or soliloquy in the plays, or the chronological discrepancies between Shakespeare's characters and their historical prototypes. *Henry V*, which is the culmination of the series, is a play lauded for its depiction of the greatness of its central character, formerly irreverent, irresponsible Prince Hal, now King Henry, "sudden scholar made" and "true lover of the holy Church." In a world (A.D. 1948) which professes to be sick and weary of war, which longs for international-

[2] "Turgot," *Biographical Studies*. London: Macmillan Company, Ltd., 1923. p. 45.

ism, we are asked by some idolatrous Shakespearean scholars and theatrical British chauvinists of the Olivier stripe to hold great a man who waged war on France for the basest of motives—to consolidate opinion and prevent the growth of dissenting factions at home, to achieve a reputation foraging in the blood of French nobility which would eclipse that of the most renowned and bloody-handed of his forebears, and to get revenge for a personal insult (really only a prank which he deserved) at the hands of the Dauphin of France. These things Shakespeare shows explicitly. And he also shows Henry, perhaps one of history's sternest advocates of unconditional surrender, vindicating himself by saying that he is God's vicegerent on earth conducting a holy war; for war is God's beadle, His vengeance, necessary from time to time so that He can punish men who have broken the King's laws, yet managed somehow to escape the state's justice. The issue is simply, then, whether the human greatness of this character is a truth or a lie.

Yet today there are still people who, without Henry's cruelty or dishonesty, believe that war is God's beadle. These are the false simplifiers, creatures who do not reason but believe what their prejudices and fears impel them to believe. Some nations, in their view of things, are bad, and some are good; those that are bad start wars and have to be punished by being conquered by the good, whose power is that of God. It is all as simple as that. Yet some of these simplifiers are self-appointed intellectual leaders and have attracted, through a certain fluency and sense of the timely, something of a following.

THE genuine intellectual simplifier knows that there is no such thing as a bad nation, with militarism and war-making in its blood. He sees human beings the world over, in all lands, essentially the same, wanting the same things from life and trying to obtain them in the same way. He knows that war grows out of specific causes, economic, political, psychological, of which individual men and women, if they genuinely want and try to, can rid themselves.

The present inflation affords pseudo-simplifiers an exceptional chance to show their powers. Things cost so much to buy because they cost so much to make, and they cost so much to make because manufacturers have to pay such high wages to the workers who make them. Labor is to blame, and things will be set right and prices come down only when labor is put in its place. And labor can be put in its place by passing laws to weaken its power of collective bargaining. It is all as plain as the nose on anybody's face. But the genuine simplifier knows that workers have had to demand increases in wages because the prices of the things they needed in order to live were high, and the prices of things were high because the war had made them high. Manufactured commodities were relatively scarce during the war, and their scarceness helped make them high. They were high, also, because the government allowed them to become so in the belief that, as manufacturers made bigger and bigger profits, they would produce more and more to help win the war.

What we do is the result of our state of mind; and war engenders a

[*Continued on page 274*]

The Air University

By JAMES C. SHELBURNE

A Unique Program of Professional Education

PRIOR to the second World War, the professional education of United States Air Force officers, while under the general conduct of the Training Division of the War Department General Staff, was largely left to the various major and subordinate commands for administration and implementation. The outcome of this policy was that there were serious conflicts in doctrine taught, wasteful duplications of effort, and ominous gaps in which no instruction was offered.

These deficiencies in the professional education of the career officer became all too apparent during the war, and demanded solution. Moreover, the emerging global and technological character of air warfare created a new requirement for the education of the future officers of the United States Air Force, demanding not only a change in the administration of the professional educational plan itself, but also a revision in its fundamental character.

Military history bears striking testimony to the fact that tactics follow technology. The rate with which a nation narrows the time lag between new scientific developments and their tactical and strategic implementation may well mean the difference between victory and defeat. Our national air security makes it mandatory, therefore, that our United States Air Force be eternally contemporaneous with science. Indeed, it is now essential that in the formulation of concepts and the development of tactics we anticipate future developments in the laboratories of the nation.

This much is certain—that if and when war comes, it will come with appalling suddenness, and we will not be able to afford the luxury of time in which to learn, as we have in the past, from friend and foe. It would be well for us to keep in mind the statement of Mr. Lilienthal, chairman of the Atomic Energy Commission, made at the seventy-fifth anniversary dinner of the *Popular Science Monthly*, on May 1, 1947: "This is indeed a great force we have in our hands. . . . If in dealing with it we are too stupid, we may not have to worry about the ridicule of our descendants. We may have no descendants."

To avoid a repetition of pre-war deficiencies and to assure a progressive system of professional education for its officers and future leaders, the United States Air Force established the Air University as a major command in December, 1945. The Air University is made up of the Air War College, the Air Command and Staff School, the Air Tactical School, the Air Special Staff School, and the School of Aviation Medicine. It also

has supervisory responsibility over the curriculum of the Air Institute of Technology, which is under the control of the Air Materiel Command.

IN ADDITION to operating its constituent schools, the Air University has many other responsibilities. One of the most important is control of the program for the education of Air Force officers in civilian educational institutions. The Air University recommends the selection of the specific graduate and undergraduate courses of instruction to which officers on duty with the United States Air Force may be detailed. The Air University receives and screens all applications for attendance at such courses and recommends the particular college or university to which qualified applicants should be detailed, together with the specific course for which they have been found eligible. During the period of their assignment, the University administers this group of students, monitoring its progress and ensuring its general welfare, with particular reference to requirements for flying proficiency, equality of promotion, and leaves of absence. The Air University is also responsible for administering and controlling U.S.A.F. officers on duty as instructors at non-U.S.A.F. service schools below the joint school level; and it is also charged with over-all responsibility for the continuous study of the U.S.A.F. educational and training system for officers, to ensure a progressive system and to see that, while all essential fields of education and training are included, no duplication exists.

The Air University has two corollary functions which grow out of, and are closely connected with, its educational functions. It is charged with the review, revision, and preparation of publications pertaining to U.S.A.F. basic doctrine, including field manuals and similar documents. It is also charged with the review and evaluation of tactics and techniques in use, or of new tactics proposed for use, by the U.S.A.F.

As a guide to planning, the Air University early developed and published the following statements of policy:

1. The dangers of traditionalism and rigidity of thought must be recognized as a constant threat.

2. An adequate air-defense doctrine must be revived.

3. Since air power is global, thinking must be global, and full use must be made of global rather than traditional iconography.

4. The ultimate objective of air power is to force capitulation of an enemy nation by air action directed against the vital points of its national structure.

5. Our objective must be to develop in officers powers of thought and expression, meanwhile providing them with the tools of their profession. In addition to imparting these skills and techniques, the courses of study must be designed to guide future thought in the Army Air Forces.

6. All officers must develop facility in oral and written expression.

7. The armed forces exist primarily to preserve peace. In his dedicatory address at the opening of Air University on September 3, 1946, Major General Muir S. Fairchild, the commanding general, said:

> We conceive it to be the high and noble goal of the Air University to educate and to aid in producing the planners and future leaders of the Air Force. It is our honest belief that the more nearly capable our future Air Force is of adequately dealing with any situation that may confront it, the less will be the likelihood of its employment in war. Should

the Air University succeed in educating and producing such planners and future leaders that they may design an Air Force so adequate that it never need be used, we shall have completely fulfilled our mission.

AFTER the young officer has finished his initial specialized training in the Training Command and has been assigned to an Air Force unit, he will serve from one to four years before he enters the first school in the Air University system. This is the Air Tactical School, located at Tyndall Field, near Panama City, Florida. Here he will be prepared for the command of squadrons and for staff duties appropriate to that grade; that is, his next approaching responsibility in the rank of captain, major, or lieutenant colonel. The emphasis in this school is largely on furnishing him with the necessary skills and techniques, or tools of his trade, as a commander or staff officer. The curriculum embraces the responsibilities of leadership, tactics and technique, staff work, oral and written self-expression, the organization, capabilities, and limitations of ground and naval forces, public information, civil affairs, administration, military management, methods of instruction, communications, and supply. The course is three and one-half months in length. The first class matriculated in January of last year. There are three classes each year.

After graduation from the Air Tactical School and a suitable period of intervening service, varying from four to twelve years, about sixty per cent of the officers will be selected to attend the Air Command and Staff School, located at Maxwell Field, Montgomery, Alabama. Here the officer is prepared for the command of groups or wings and for staff duties comparable to those which go with the rank of colonel. The present course is nine months in length. This course is oriented on the group, wing, and air-force level, primarily aimed at answering the question of how to apply air power. Approximately half the emphasis is on furnishing skills and techniques of command and staff, with like emphasis on a broad orientation tending to lead to careful thought on why, when, and where to use air power. A great deal of stress is placed on broadening the subject-matter required by the global character of air power itself. In this school great stress is placed on the responsibilities of leadership and on facility in oral and written expression, as well as on management, civil affairs, public information, and other military subjects.

The Air War College, as the senior school in the Air University, has a very broad mission which is concerned with strategic rather than tactical considerations. In *Makers of Modern Strategy*, Edward Mead Earle writes:

> Strategy deals with war, preparation for war, and the waging of war. Narrowly defined, it is the art of military command, or projecting and directing a campaign. It is different from tactics—which is the art of handling forces in battle—in much the same way that an orchestra is different from its individual instruments. Until about the end of the eighteenth century strategy consisted of the body of stratagems and tricks of war—*ruses de guerre*—by which a general sought to deceive the enemy and win victory. But as war and society have become more complicated—and war, it must be remembered, is an inherent part of society—strategy has of necessity required increasing consideration of non-military factors, economic, psychological,

moral, political, and technological. Strategy, therefore, is not merely a concept of wartime, but is an inherent element of statecraft at all times. . . . The highest type of strategy—sometimes called grand strategy—is that which so integrates the policies and armaments of the nation that the resort to war is either rendered unnecessary or is undertaken with the maximum chance of victory.[1]

The objective of the Air War College is to consider air power in its relation to grand strategy, and to act as a thinking and planning group for the Air Staff in Washington. Many graduates of this school will in time become the highest commanders and staff officers of the United States Air Force. Approximately one-fourth of the graduates of the Air Command and Staff School will attend the Air War College after a number of years of general duty. Eventually, students will be selected for attendance who have between eight and sixteen years of service.

The Air Special Staff School has the mission of offering specialized instruction not found in other schools of Air University, and at present offers courses in public information, air inspection, military management, and air communications. This school is located at Craig Field, near Selma, Alabama. The communications course, however, is given at Gunter Field, near Montgomery.

The School of Aviation Medicine, located at Randolph Field, Texas, has been operating for a number of years and is currently conducting courses for aviation medical examiners, flight surgeons, aviation nurses, members of the medical corps, and air evacuation personnel. The courses vary in length from two to eleven weeks. The school also conducts basic research in the physiology of flight and the psychology of flyers.

[1]Princeton, New Jersey: Princeton University Press, 1944. p. viii.

THE instructional staff of the constituent schools and colleges of Air University is made up largely of officer personnel who are subject-matter specialists in various fields. With few exceptions, these specialists have had little or no previous experience as instructors. Faced with this situation, the Chief of Staff, United States Air Force, established a Board of Visitors with the mission of advising periodically with the commanding general, Air University, and his staff on matters of broad educational policy. This Board is made up of the following educators:

Karl T. Compton, President, Massachusetts Institute of Technology
Willard E. Givens, Executive Secretary, National Education Association
Raymond R. Paty, Chancellor, University System of Georgia
Elliott Dunlap Smith, Provost, Carnegie Institute of Technology
Francis T. Spaulding, President, University of the State of New York, and Commissioner of Education
Robert L. Stearns, President, University of Colorado
George D. Stoddard, President, University of Illinois
John W. Studebaker, United States Commissioner of Education
George F. Zook, President, American Council on Education

In addition to this Board, and to provide for day-to-day consultation and advice on educational methodology, a staff of some fifteen full-time professional civilian consultants, designated as the Educational Advisory Staff, was constituted. This staff is responsible to the commanding general and, through him, to all lower echelons, for specialist advice and technical service on matters of educa-

tional policy and procedure. It initiates and co-ordinates educational research and its implementation in instruction in Air University. It advises on the use of civilian institutions and professional personnel from civilian institutions and agencies when necessary to accomplish the mission of Air University. Upon request, it also provides instruction to staff and students in selected subject-matter and professional fields.

The staff is organized into four specialized branches. The Instructional Materials Branch advises on the types of instructional materials, both textbook and audio-visual, necessary to effective instruction and also assists in the development and preparation of manuals, brochures, pamphlets, bulletins, and other publications. The Instructor Training Branch directs and co-ordinates a program of instructor training for all personnel assigned to the University in an instructional capacity, follows up the more formalized instructor-training course by a program of class visitation in all schools and colleges, evaluates and reports on instructor efficiency, and assists in trying out new techniques of instruction. The Instructional Methods Branch advises and consults on instructional methods employed in the University, plans and executes research in instructional methods so that the most efficient methods of instruction are employed in each particular situation, and assists in the planning, integration, scheduling, and evaluation of units of instruction. The Evaluation Branch advises in the use and interpretation of tests and other evaluation devices, assists in the construction, statistical analysis, and editorial revisions of evaluation instruments and procedures for courses and for other purposes, and plans and executes research in test construction and in techniques of evaluation.

IN ASSESSING the contribution of the Educational Advisory Staff, the commanding general, addressing a group of visiting educators at Maxwell Field on July 11, 1947, said:

> After completion of our first academic year, I am certain this [the formation of the Educational Advisory Staff] was indeed a wise and forward-looking step. This innovation in not only the military but civilian educational fields has succeeded beyond our greatest expectation. . . . The Educational Advisory Staff permeates the educational pattern of Air University and its constituent schools and colleges.

Inherent in this program of professional education is the assumption that the objective is not so much to inform as to provide opportunity for the development of Air Force officers at progressively higher levels. This progressive system of professional education contemplates that the most highly selected officer who attends all schools and colleges, including the National War College, will spend five out of his first twenty years of service going to school. The average officer will spend one and one-half to two years in school. Less than ten per cent of the entire personnel of the United States Air Force will be on duty at any one time as instructors or students. The U.S.A.F. believes that the price paid for the professional education of future commanders and staff officers is modest and that the program should produce the type of officer required for the future.

Specters in Liberal Education

By MAURICE L. RIDER

With Suggestions Which the Author Believes Will Lay Them

LIKE the ghost of Banquo at the feast in *Macbeth*, specters of defunct educational theories still haunt curriculum committees in nearly every liberal-arts college in America and do more than their fair share to determine the method and the content of liberal education. We may rid ourselves of a few superstitions that balk the success of general education if we stop to examine five of these specters: first, the mistaken notion that the methods and materials of instruction deserve more serious study than the student who is to be educated with them; second, the lack of controlled experimentation; third, the emphasis on fact at the expense of moral and esthetic training; fourth, the notion that education for democratic living must be uniform; and, fifth, the belief that the fate of democracy depends upon universal liberal education.

The first specter to haunt the educator is the mistaken notion that the value of a liberal education can be determined without considering the nature of the individual student. We have continued to refine the materials and methods of instruction while we neglect the factors each youth brings to his education—his innate capacities and his power to develop them. We have not sufficiently used the broadest principles of growth and heredity.

The concept of student growth in liberal education is, of course, not new, but certain aspects of the nature of growth have sometimes been forgotten. Trees will not grow without moisture, air, sunlight, heat, a few chemical elements, and a suitable place to anchor themselves. The first four of these must be supplied at the right time as well as in the right proportions. A deciduous tree will shed its leaves and pass through an annual dormant stage regardless of the favorable growing weather with which it may be provided throughout the year. People, of course, are not trees, and the analogy cannot be pursued too closely, but the psychologists tell us that the learning process is very much like physical growth in that it is gradual, intermittent, and organically integrated. Like physical growth, it also depends upon the total environment of the learner, and that implies food, clothing, and shelter, as well as the smile of the teacher.

The dual rôles of heredity and environment need also to be considered in connection with general education. Both are determining factors in the life of an organism. A grain of corn will not produce an oak, no matter how favorable the environment is made for the growth of oak trees, nor will the grain grow into any kind of corn at all if moisture and

light are denied it. How good any stalk of corn may be depends upon the genes in the embryo as well as the cultivation and the growing season. We sometimes forget that these principles apply also to youth.

We know what corn is, and we know what must be provided to make it grow. With a reasonably narrow allowance for individual variation we know that a bushel of seed corn will produce an even stand if provided with a uniform environment. This is true because we have standardized the breeding of corn through years of careful selection. The same is not true of man because we have not been able so precisely to determine his nature and nurture. If by eugenics we could eventually determine the first of these, then by experimentation we might rather quickly determine the second. At present we are not convinced that the first is really possible, but we continue to experiment with the second without having any real controls or bases for evaluating the results. This is the greatest weakness of all educational studies and the direct cause of their inconclusiveness.

The second specter takes shape in the belief that we can derive valid data by experimenting with segments of education and cross sections of the student population. We must think of education as everything that happens to an individual from conception to extreme unction. Changing the methods of formal education for a young man during four or five years of his life may not invariably have a dominating influence upon his whole later existence. Too much that has gone before, too much that may come later, and too much that is going on during that time and outside the control of the college will also shape the individual. As for the student population, the average college now enrolls a heterogeneous group, a cross section of all youth seeking higher education. Data gathered from such groups are likely to yield little information of value in planning a liberal curriculum. On the other hand, a casual examination of the entrance requirements of most exclusive colleges shows an attempt to choose only those individuals who can profit from the specific program the college has to offer; and, in so far as these institutions are able to get the kind of student they want, they are able to show a like uniformity in the educational product. But their success proves nothing about the virtue of their procedures for all of the college population. A state university that takes all men's sons seldom has a distinctive program and, if it did, the chances of its being phenomenally successful are extremely rare. Educators fail because they cannot take into account all the variables which determine the success of their efforts.

The third specter is the tacit assumption that a liberal education is adequate if it can supply enough facts and ideas for the growing mind, enough games to exercise and develop the body, and a few useful skills to learn, so that the practical parents will keep the tuition money coming. But a liberal education must do more than provide the teething rings of thought and the diapers of dialectics; besides gymnastic gadgets, the growing animal needs sounds, shapes, colors, and ideas to titillate his sympathetic nervous system. In short, his pedagogical forage must encourage the optimum desirable development of health, hand, head, and heart. Today,

the most urgent of these to be developed is the heart, because it has been most neglected with the growing incubus of modern science.

The viscera will be exercised, the heart lifted up, the eye brightened, the spirit fed by something, be it boogie-woogie or Brahms, surrealism or Raphael, Edgar Guest or George Santayana. Some men will by preference feed upon the husks of life, the insipid fare of the poetaster and the dilettante. But many another lad, like Samuel Johnson, will learn to prefer tainted meat only because he grew up on it. Man may yet take the laboratory, the factory, and the supermarket to his heart; but in all this mechanical world there must still be places and times when the voice of the turtle is heard in our land and the young man can look above and beyond the excrescences of his mundane existence to see the heavens declare the glory of God. How beautiful upon the mountains are the feet of him that bringeth esthetic insights without which youth is forever poor!

The fourth ghost in the educational miasma is the belief that our ill success is due to our lack of unity. We keep telling ourselves that if liberal education in a democracy is to be effective, it must first agree upon goals—goals all can achieve. But it is characteristic of democracy that, except in time of war when we abrogate our rights as citizens, the collective mind is not made up. We cannot agree on what the liberally educated young man should know. In a free society it is hardly desirable that everybody should learn the same lessons in the same way. Unanimity would in the long run be as fatal as anarchy. The great beauty of a democracy is that almost any kind of institution can thrive within it. Furthermore, many of the most undemocratic of these institutions contribute mightily to the understanding and promotion of democracy. Witness most of our churches, our army and navy, and our law-enforcement agencies—even many of our better schools. Is it not even so with the Ku Klux Klan, communism, and Judge Lynch? Who can value day who has not endured the night?

If, therefore, we were to say what colleges America should choose to perpetuate her democracy, we could not rule out Black Mountain and her communal living, Harvard with her emphasis on the best minds doing the most difficult work, St. John's with her boys steeping themselves in the great books, the General College of the University of Minnesota, valiantly trying to find some way of educating everybody, or Bard College, where each man shapes his ends, rough hew them how the college will. Indeed we would not rule out any college which can attract enough students and capital to graduate loyal and enthusiastic alumni. Education, like all the rest of life, operates in the present, and, without our quite knowing how, shapes, and fades into, the future. The right education for Americans will survive and flourish, which is another way of saying that the education which survives will be the right one. Our present diversity in general education is an indication of health rather than disease and, if several forms of liberal learning continue to burgeon here, we may yet become the light, rather than the laughingstock, of the world.

The fifth specter is the very painting of our fears. It is the con-

viction that whom we shall teach in a democracy depends upon those who must assume the management of the state. If everyone has the franchise, then everyone must be educated to the point where he can vote intelligently. Some educators would ask us to believe this feasible. We are operating in America on the assumption or the hope that it can be done.

Now everyone who will eventually enjoy the franchise can be educated a little, for there is scarcely a dull ass will not mend his pace with beating. But can Everyman be educated enough to save the state? We do not know. Experience has taught us, however, that if Everyman cannot do it, his friends and neighbors can and will. There have always been those who saved us in the past in one unsatisfactory way after another until here we sit in 1948 on the shoulders of all our former mistakes, bigger, better, brighter (and hence less self-assured) than ever before. One more unsatisfactory answer will not crush us, even if it comes from Everyman, properly educated. No one has yet proved that it is formal education which saves the world, and teachers are doomed to perpetual unhappiness if they really believe it. The education of all for the salvation of the world is noble in conception, and we doubt not the sincerity of its proponents, but can it ever amount to more than poorly paid busywork for the teacher?

THESE horrible shadows, unreal mockeries, will vanish when we provide a good liberal education for all who want it—*when* they want it. This attitude implies four basic approaches, neither entirely new nor untried: first, the liberal-arts colleges will require no student to pursue a "cultural" course from which, after a fair trial, he feels he can derive no value other than credit toward a degree. This means that every student in a non-vocational course will be there because he realizes the value of that course in helping him achieve his ideal of the good life. Second, the liberal-arts college will give no degrees. It is useless to argue that no one knows what the Bachelor of Arts degree means today, but we do know that in four or five years of college, American youth do not complete their cultural education. The cultivated man pursues the liberal arts throughout his life, and at no one time is he willing to say that his cultural education is complete. The arts degree unfortunately implies that the student who receives it is in some way competent in practicing the good life and is now free to neglect culture in the pursuit of business. Third, the liberal-arts college must be willing to enroll mature students on all academic levels where, in the opinion of the student and his instructor, a reasonable amount of learning can result. This means that older students will be allowed to profit from advanced courses without having taken prerequisites which now so often provide the only admittance to these classes. The proposal is just a way of recognizing the achievements and capacities of a prospective student who has acquired a large share of his liberal education outside the walls of a college. Fourth, the department in which the student specializes will determine the adequacy of his general education. It would seem that this is the most effective way of being sure that all specialists get a thorough cultural background, for, if the student

cannot see for himself the necessity of broad training, he is still likely to respect the judgment of experts in his chosen field.

THESE four approaches to the problem of dispensing liberal education seem to have these points in common: They place emphasis upon what the student is, and not upon what academic machinery he has been through. They allow the student to mature culturally and emotionally at his own rate. They simplify experimentation by considering each student as a unique phenomenon in liberal education, and they imply that educators no longer need worry about the fate of democracy if every student in college gets the best training he can assimilate. In short, it is conceivable that the four-point plan might eliminate all the specters identified in the preceding pages.

When a student in the liberal-arts college thinks he has what he came for, he is free to leave. When he feels that he needs more instruction, he may return for it. The college will thus resemble a library where a man may read as many or as few books as he likes. No student need be enrolled in a cultural course which, at the time, he does not want, but he is always free to change his mind as his tastes and interests develop. The cultural education which cannot "sell" itself to the student will fare little better when it is arbitrarily required of him; hence, either method is likely to bring the same results.

A large share of responsibility will, of course, devolve upon the student. Professional and graduate schools will require that he pass an entrance examination where formerly his degree would admit him. On the student shall rest the proof of his learning, if he plans to use his education for promotion, personal gain, or public service. All this means only that the student will be asked to demonstrate his maturity, for in a final analysis the educated man must decide for himself what he does and does not know, and all the degrees in Christendom will not spare him that responsibility.

No doubt the plan has many weaknesses, some of which are apparent in this sketchy outline. But there is one objection which, in the minds of a few, will outweigh all the faults. For a few years, at least, adoption of the plan would bring fewer students to the liberal-arts colleges. Some of us are not ready to admit that we have failed to educate Everyman, if, by doing so, we know that he will no longer be required to attend our lectures. Here the educator must examine his own heart to see if his idea of liberal learning is for the glory of the educational god or the greater good of the student.

· With the · Technicians ·

A Proposed General Course in Social Science[1]

Social problems may be approached historically, analytically, or philosophically. The central problem in organizing an introductory course in social science is not the problem of content but the problem of method. If the choice between, or combination of, the historical, analytical, and philosophical treatments of society is achieved, the frame of reference for questions of content is delimited and these questions are on their way to being resolved. Hence method must be considered before content.

The divergence of opinion among social scientists who venture to discuss general courses cutting across departmental boundaries apparently centers upon the matter of content, but the disagreement really results from the variation in shade of social theory applied to the social problem by individuals of heterogeneous training and experience. That is to say, the disagreement concerns method, not content. An economist believes that a general course in social science must require appreciation by the student of the implications of value theory, not because he believes exaggerated significance to inhere in the theory but because his approach to society is primarily analytical and such an external theory is necessary to objective analysis. Political and sociological theorists also utilize method as the criterion of content essentially analytical in implication.

An historian, however, has different ideas of what should be included in an introductory course in social science, or of where emphasis should lie when content is given, because of his concern with the teleology of society and its extrapolation. His approach is different; therefore his content differs. Institutions and events tend to receive more emphasis than relationships and their adjustment.

Social science reaches the crossroads at this point. To what extent are historical and analytical approaches to society mutually exclusive? This question must be answered if we are to be social scientists rather than historians, political scientists, sociologists, and economists. Similarly, the question must be answered if we are to give a course in social science rather than an abbreviated series of surveys of our respective specialties and fields.

To the extent that social scientists achieve a philosophical synthesis of the social sciences, the problem of methodological conflict is resolved, both with respect to social science in general and with respect to the proposed general course in particular. If the course lacks such philosophical synthesis, it will degenerate into an introduction to each of the already too superficial introductory courses in the social sciences. A general course in social science could easily become a survey course of a field so

[1]Reported by Cornelius Willet Gillam, Professor of Economics, Carleton College.

broad that its breadth would preclude the very depth for which we strive.

If a general course in social science is not a survey course, what is it? It has been called an introductory course, and rightly so. But it is not introductory to the other courses in the social sciences; it is introductory to the implications of society itself, to the ideas which society has generated and which are the indispensable frame of reference for analytical and historical considerations of society. Hence the general course is—or should be—essentially a course in social philosophy, providing the starting point for a systematic theoretical treatment of society which should continue its development through all the courses in social science. The logical counterpart of the freshman general course would be an integrating seminar in social philosophy for senior social-science majors.

The introductory course in social philosophy should combine theoretical treatment with a minimal consideration of institutional and factual material if it is to be within the intellectual grasp of the average Freshman, who cannot absorb overdoses of abstraction. Here the analytical and historical methods enter into the course to some extent, and here the most difficult practical problems are encountered.

No doubt the most important of these practical problems is that of personnel. It is unlikely that any one individual would be capable of teaching the course, unless his should be a most unusual intellect, because of the way in which the institutional environment of graduate students and college faculties tends to emphasize methodological differences. A small staff of particularly effective teachers, endowed with unusual qualities of intellectual breadth, perception, and tolerance, is required.

Members of the general-course staff should be free from other teaching or administrative duties. As experienced teachers, they should be able to appreciate the curricular implications of their work on the basis of this experience, and organization of the general course would be an undertaking sufficiently difficult to require the undivided attention of those responsible for it. Class sections for the course should undoubtedly be small (not more than twenty students). This means multiplication of class hours for the staff, especially if, as is of extreme importance, each member of the staff attends every class meeting, whether or not he is personally conducting it. Integrated treatment would otherwise be impossible.

Furthermore, the staff would be faced with a serious problem in bibliography. Arrangement of lectures and readings would be a problem of some magnitude and would require a great deal of time. And it would be desirable to print or duplicate individual volumes of readings for distribution to the students.

Chairmanship of the staff should be in the hands of a philosopher. By training and experience, a philosopher would be best suited to guide the general development of the course, because of his ordinarily superior ability to extract universality from heterogeneity. He must be a man of breadth, tolerance, learning, modesty, and pedagogical brilliance, and his associates must share these qualities. It should be the responsibility of the

chairman to create a staff consisting of men or women sympathetic with the broad objectives of the course but of particular capacity in history, political theory, government and administration, jurisprudence, economic theory and policy, geography, psychology, and social theory and institutions. This is clearly a good deal to expect, particularly from a small college.

Not the least of the practical problems involved in setting up the course is financial. Private charity is drying up as a source of funds, lowered interest rates dictate reduced income from endowments, and higher education costs more to provide. Tuition in many institutions is as high as it can go without adversely affecting enrollment, and living costs have risen to an unprecedented level. Clearly, a general introductory course in social science, conceived along the lines suggested, would be an expensive course to offer. It would require a large staff, much stenographic and incidental expense, and a probable loss in publishing syllabuses and readings (particularly in a small college where fewer copies could be sold). This expense would be incurred without an offsetting increase in income (unless the course attracted more students or a special course fee were charged) and would probably result in a net loss, imposing an additional burden upon institutional funds. This situation is of especial moment to the small private college, for obvious reasons.

Practical considerations aside, the intellectual value of such a course is believed to be substantial. The departmental subdivision of courses in social science permits and often encourages the attainment of some competence in one field without adequate appreciation of the social problem as an indivisible whole. The lateness with which this appreciation comes to many students not only diminishes the benefit of particular courses and of liberal education in general, in a purely intellectual sense, but also is responsible for much of the vocational or professional maladjustment which exists in a society which determines its values in the market place. If the student fails to see the relationship of the part to the whole, he tends to identify himself with the fraction, and both he and society suffer accordingly.

Spelling in College[2]

Spelling is traditionally an elementary-school subject, but the need for attention to the improvement of spelling at the higher levels of the school is shown by the fact that numerous individuals above the elementary school are greatly handicapped in ability to spell. Few secondary schools make a systematic attempt to teach spelling, although the number of these schools giving attention to at least the remedial aspect of spelling has increased considerably in recent years.

Aside from incidental help in connection with English themes, the provision for spelling instruction is negligible in nearly all colleges. However, from the time Lester published his article "Teaching Freshmen to Spell" (8) to the present, different investigators have from time to time

[2]Reported by Arthur E. Traxler, Director of the Educational Records Bureau, New York.

turned their attention to the problem of teaching college students to spell. Thus, a number of useful research articles dealing with spelling at the college level are available. The purpose of this paper is to provide a brief overview of this literature.

It is known that certain abilities such as vocabulary and reading tend to improve to some extent during the college years, while others such as handwriting apparently become lower in quality. Under usual conditions where there is no program of special help, spelling achievement seems to remain virtually unchanged throughout college. Hartmann administered a spelling test to 636 college students and found that after the freshman year the mean scores of the different classes remained much alike. There was a small gain from the freshman to the sophomore year, but it was suggested that the slight increment might be due to the elimination of the less intelligent students (7). Data reported by Schonell on the spelling ability of college students, adults, and school pupils aged eleven to fourteen years tend to support Hartmann's findings (11).

Schonell studied the factors which contributed toward success or failure in the spelling of 447 training-college students and 151 adults. He found that, although at younger ages girls were significantly better spellers than boys, there were no significant sex differences in spelling among the college students and adults. There was, however, slightly more spelling disability among men. There was a low positive correlation between spelling ability and intelligence. Among the factors identified by Schonell as important causes of spelling disability were general disregard for details and weakness in visual and auditory perception (11).

Burton suggested that self-consciousness was an important factor in spelling difficulty at the college level. She pointed out that students who reach college without being able to spell are aware of the fact, and that their emotional concern over the disability tends to increase their spelling errors. She advised English teachers to relieve the tension by emphasizing theme content and by minimizing the importance of spelling errors. She reported an informal experiment with this procedure with favorable results (2).

In a detailed study of spelling errors at Wellesley College, Alper identified error categories and recommended specific remedial procedures. Her list of error categories was as follows: phonetic errors, distorted pronunciation, inapplication or misapplication of spelling rules, negative-transfer effect, confusion of homonyms, tension at the "hard-spot," and errors of substitution of a word or word form (1).

Schonell found that the spelling errors of adults were similar in kind to those of children. The adults' commonest error was one related to double letters (11).

Apparently Lester's *A Spelling Review*, based on a study of spelling errors in College Board examinations, continues to be the best source of words misspelled by entering college students (9). However, one or two other investigators have supplied useful supplementary lists. Farrell culled five hundred words often misspelled by college Freshmen from several

books. He submitted one hundred words at a time to classes in freshman English at the University of Tennessee during a three-year period, and he kept a record of every misspelled word. On an average, one hundred Freshmen were tested each year. The number of times each word was misspelled was totaled and the errors classified. Farrell reported the one hundred words most frequently misspelled, with the number of misspellings for each one (3).

Several tests have been devised which should be useful in evaluating the spelling ability of college students, although apparently none of these tests has adequate college norms. In connection with an experiment in the teaching of spelling, Guiler prepared a fifty-word spelling test based on the Iowa Spelling Scales and Horn's ten thousand words. A median of approximately 40 reported for entering Freshmen indicates that the test is comparatively easy, but it would probably be suitable for use in selecting remedial cases (5).

For purposes of his study of spelling ability and disability among college students and adults, Schonell constructed a sixty-word spelling test on which the average scores were approximately 42 to 43 (11). Alper constructed the Wellesley Scale, a fifty-word list-dictation test based on the most frequently misspelled words in the active vocabulary of college students. The exact list of words used in the test is not reported in her article (1).

Most colleges would probably find the Diagnostic Spelling Test devised by A. L. Lincoln useful, notwithstanding the fact that there are at present no college norms for this test. The test exists in four forms, each consisting of one hundred words drawn from spelling lists based on frequency counts and arranged to test knowledge of various spelling rules. There are fall and spring percentile norms on all four forms for independent-secondary schools. Because of the fact that the independent-school population is rather highly selective, it is probable that the norms for Grade XII would be fully as high as those for colleges in general. The reliability of the total score on the test is about .93 (10, 12).

Very little research has been done on the value of the remedial teaching of spelling among college students. Guiler has done some experimental work in this area with favorable results. He recommended that in remedial instruction, study and practice be focused on the part or parts of words which proved most difficult for individual students (5, 6). Alper set up remedial spelling procedures with students at Wellesley College (1). Gilbert and Gilbert found that superior college students who perceive quickly can improve their spelling through reading, but warned against interpreting this finding to mean that students gain as much spelling through reading as they do through direct study (4). Further experiments on the values of remedial and corrective spelling at the college level are needed.

BIBLIOGRAPHY

1. Alper, Thelma S. "Diagnostic Spelling Scale for the College Level: Its Construction and Use," *Journal of Educational Psychology*, XXXIII (April, 1942), pp. 273–90.
2. Burton, M. E. "Note on Spelling," *English Journal* (College edition), XXVI (October, 1937), pp. 654–55.
3. Farrell, Alfred. "Spelling as a College Subject," *Journal of Education*, CXXII (January, 1939), pp. 20–21.
4. Gilbert, Luther C., and Gilbert, Doris Wilcox. "The Improvement of Spelling through Reading," *Journal of Educational*

Research, XXXVII (February, 1944), pp. 458–63.
5. GUILER, W. S. "Improving College Freshman Spelling," *Journal of Educational Research*, XXIV (October, 1931), pp. 209–15.
6. GUILER, W. S. "Spelling at the College Level," *Journal of the American Association of Collegiate Registrars*, XX (October, 1944), pp. 96–105.
7. HARTMANN, G. W. "The Constancy of Spelling Errors among Undergraduates," *Journal of Educational Research*, XXIV (November, 1931), pp. 303–305.
8. LESTER, JOHN A. "Teaching Freshmen to Spell," *English Journal*, V (June, 1916), pp. 404–10.
9. LESTER, JOHN A. *A Spelling Review*. Pottstown, Pennsylvania: Lester Publishing Company, 1928.
10. LINCOLN, A. L. *Diagnostic Spelling Test*. New York: Educational Records Bureau, 1941–44.
11. SCHONELL, F. J. "Ability and Disability in Spelling amongst Educated Adults," *British Journal of Educational Psychology*, VI (January, 1936), pp. 123–46.
12. TOWNSEND, AGATHA. "A Study of the Lincoln Diagnostic Spelling Test," *1943 Achievement Testing Program in Independent Schools and Supplementary Studies*. New York: Educational Records Bureau, June, 1943. pp. 49–53. (Educational Records Bulletin No. 38.)

The Basis of Training for Personnel Work[1]

Personnel work, whether in schools, industry, or other agencies, has become mature enough so that some perspective can now be gained on the most adequate basis of training for this important field of service. This field of work, concerned as it is with those functions which provide for the systematic and professional treatment of the human factor in any organization, depends heavily upon a thorough and penetrating knowledge of the individual human being. For this reason, it has long been granted that training for this vocational field has its roots in the science of psychology. There is no quarrel with that point of view for, indeed, the writer is a psychologist. Psychology is in itself however, too limited to provide the complete background necessary for an adequate incorporation of personnel functions into an organization and into society.

It is true that a personnel worker first needs professional knowledge and skills that deal with an understanding of the person. He needs a thoroughgoing knowledge of the development of the human organism physically, emotionally, and intellectually, and needs more of this understanding of the human being than is possessed by the average teacher, foreman, or administrator. His position is that of a specialist in the area of the optimum adjustment of the individual to an environment. In this connection, he needs to know thoroughly and systematically the various methods for appraising human characteristics and the statistical methods for dealing with these data so as to derive the greatest meaning from them. He must be skillful with those professional skills which deal with the person through counseling and through group relationships. The skills needed in interviewing, clinical diagnosis of aptitude and adjustment, psychotherapy, and group therapy must be at his finger tips. These may be appropriately called personnel procedures.

But these are not enough. The individual lives in and is conditioned by the stresses of his environment. It is useless to attempt to understand or deal with an individual intelligently unless one understands also the environmental pressures which make him what he is. Professionally speaking, this means a knowledge of the immediate environment through a study of the particular agency in which personnel functions are being carried out. For the educational per-

[1]Reported by C. Gilbert Wrenn, Professor of Educational Psychology and Graduate Adviser in Personnel Training, University of Minnesota.

sonnel worker, it is essential to have a thoroughgoing knowledge of the purposes of the school or college, something of educational history, a great deal of educational philosophy, and an appreciation of the results to be obtained from different types of educational organization. For the industrial personnel worker, there is a like emphasis on the field of industry in general and on the particular type of industry in which the personnel worker desires to apply his skill. But there is a larger environment too, that of society itself. One must know societal trends and the pressures and mores of society before one can either understand the past or attempt to predict the future of the individual. The fact remains that too many psychologically trained individuals are insufficiently alert to societal forces.

In presenting a systematic point of view on training for personnel work, I should like to propose that all training be directed toward three sets of objectives: skill in the use of personnel procedures, a knowledge of organization, and an awareness of values.[4]

It is probably unnecessary to say much regarding personnel procedures since these comprise the most frequently stressed objective at the present time. These are the "how" in dealing with appraisal, selection, placement, adjustment, training, and so on. Back of this know-how must be a thorough grounding in the "what"—the person and his society as discussed in the earlier part of this paper. In academic terms this means basic study in psychology and sociology, some in each field certainly to be beyond the undergraduate level. Most of the "how" courses are applied psychology—developmental psychology, psychological measurement, individual and group therapy, psychology of learning, and such procedures in dealing with the individual as were mentioned in the second paragraph of this discussion. But the "how" applies also to materials and situations, records, pay systems, and occupational information, and training in such procedures may be found throughout the professional schools of education, public administration, and business administration. More than all of the specific courses in procedures, the internship or work-under-supervision experience looms high in importance. So much of the "how" cannot be learned in courses alone but must be experienced. And we now know that it is just as disastrous to turn a personnel worker loose upon society without experience under supervision as it is to turn out a medical student without his internship. The bad results may not be as individually disastrous but the effect upon society may be more profoundly disturbing.

In the second place, one must know the organizational relationships within which these procedures are to operate and the best manner in which personnel procedures can be organized into the total structure of the agency or institution. The distinction between line and staff relationships in personnel administration must be clarified and this clarification of the organizational concepts involved in personnel work must hew new paths in both industrial and educational fields. This is true because at present there is no other area that touches so completely

[4]An earlier and less comprehensive outline of training was presented by the writer in "Training for Student Personnel Work," JOURNAL OF HIGHER EDUCATION, XI (May, 1940), p. 273.

the entire organization. The functions involved cut across present line relationships in a manner that is dismaying to an orthodox administrator. It means that if the job is to be well done, new and effective staff relationships must be set up, based upon a workable core of personnel responsibilities under the direct control of the personnel administrator. It also means the education of all personnel in the organization regarding the functions of the personnel department, since these affect each man personally and his relationships to the men under him and the men over him. Training in this area lies in the fields of educational, industrial, and governmental organization, based upon a sound foundation in the structure of society.

The third set of objectives, that of the values involved, is one which has been much neglected so far in personnel training. This is partly because those trained for personnel work have come primarily from the area of psychology or that of educational or industrial organization. Both of these fields have assumed values and known purposes, but the assumptions have seldom been made explicit for the trainee or new worker. More attention must be given to the "why" of the personnel function in terms of the welfare of the individual, the organization in which he is employed, and the society of which both are a part. This may be called the philosophy of personnel work. At a recent professional meeting of personnel workers, when the question of values was raised many claimed that values were not the problem of psychology and that their consideration would take us back into the realm of philosophy. In other words, we would be retreating rather than advancing as a professional group to consider values (purposes, aims, contributions) in the application of psychology to personnel needs. This is an indefensible position. Values are inherent in behavior and it is the task of a professional worker to make them explicit in order that he may channel his efforts and make them most effective for societal as well as individual welfare. Training contributing to this objective is difficult to isolate in an academic curriculum. It involves some philosophy, of course, some seminars arising out of professional courses on procedures and organization, but most of all the constant influence of teachers and supervisors who themselves have well-developed value concepts and a sense of the contribution to be made to society.

In brief, the training of those who are to perform personnel functions must include the "what" (knowledge of the person and of society), the "how" (procedures in dealing with people and situations and a knowledge of organization), and the "why" (purpose to be achieved, values both personal and social to be sought for).

Such training alone will not make a personnel worker. The appropriate personal qualities and some background of work experience must be presupposed. These provide the basis of selection of those who will be given the training herein suggested.

·The·Reporter·

A BEQUEST of $5,000,000 without restrictions has been received by Harvard University from the late Thomas W. Lamont.

MEMBERS of the administrative secretarial staff at Union College are now allowed to take subjects in the Extension Division of the college without tuition charges.

THE naval research laboratory is now in operation at the University of Wisconsin. It will be used for a study of the physics and chemistry of flame.

STUDENTS of Smith College will compete again this year for a prize of $50 in books, to be awarded by a Northampton bookstore for the best student-owned library, as a recognition of the owner's discriminating judgment in collecting books, and as a nucleus for a personal library.

LAND adjacent to Northwestern University has been purchased for an outdoor gymnasium and auxiliary parking area. This is a part of an expansion program, which includes the recently dedicated $1,225,000 Student Center building, third unit of a proposed six-building plant.

A NEW course for practical training of agricultural extension teachers has begun in Greece. The course will include two general sections; one is designed to train teachers of Greek farm youths, while the other will provide special training for teachers of farm-training courses for adults. The course, which includes a series of 39 lectures by Greek and American authorities, will be given at the Superior School of Agriculture. It will be open to graduate agriculturalists, to agricultural apprentices, and to third- and fourth-year students in the School. The co-operative efforts of the United States Mission for Aid to Greece, the Near-East Foundation, and the School made the course possible. Members of each of these groups are scheduled to take part in the lectures.

STUDENTS who graduate from the University of Minnesota with a Bachelor of Science degree in pharmacy after June, 1949, will be required to pass a comprehensive examination covering their four years of college work.

THE University of Wisconsin Foundation hopes to raise five million dollars through its Centennial Campaign. The money will be used to erect and equip a "Wisconsin Idea" building to accommodate institutes, short courses, clinics, and conferences; provide scholarships and fellowships; finance research professorships; and assist in providing special types of equipment.

DURING its first year, the Lowell Institute Cooperative Broadcasting Council, which was organized to pro-

vide an adult-education program by radio, presented 412 broadcasts, representing nearly 115 hours on the air, over six Boston radio stations. One hundred twenty-three faculty members and sixty-five students participated. The average weekly audience in the five counties around Boston was estimated at two hundred twenty-five thousand.

IN PLANNING the enlargement of its School of Public and International Affairs as a living memorial to Woodrow Wilson, Princeton University will be advised by an honorary sponsoring committee consisting of President Truman, Mrs. Woodrow Wilson, Mrs. Franklin D. Roosevelt, Herbert Hoover, and Bernard M. Baruch, and an active sponsoring committee of thirty-nine persons prominent in business and public life.

A NATION-WIDE campaign to raise five million dollars in money and in goods to aid educational, scientific, and cultural reconstruction in Europe and Asia has been initiated by sixty voluntary organizations in Canada. These organizations form part of the Canadian Council for Reconstruction and will contribute to the Unesco campaign for reconstruction in the war-devastated countries.

A "TUITION-EXEMPTION plan" which permits full-time, non-academic employees to enroll in courses for which they may be qualified has been arranged at Columbia University. About three thousand employees in all categories—building and ground employees, member of residence-hall and dining-hall staffs, clerical workers, and laboratory employees—are included. The opportunity applies to the educational facilities included in the Columbia University corporation. Teachers College has a similar plan now in operation.

THE Delta Kappa Gamma Educator's Award will be granted at the National Convention in August, 1948, for the published study which, in the opinion of the panel of judges, is the most significant contribution to education made by a woman in the years 1946, 1947, or 1948 (latest publication date April 1, 1948). The publication chosen may be investigative or creative. However, since the original intent of the award was that it should encourage educational research, the panel of judges will be urged to give special attention to the evaluation of investigative publications. Because of the current crisis in education, special consideration will be given to research in the selection of teachers and vital contributions to the education of teachers. In making the award, however, the quality of the study, the probable extent of its influence, and its ultimate effect upon the improvement of techniques of selection and teacher education will be balanced against other factors of equal importance. Recommendations of works to be considered may be made in a letter addressed to the Chairman, Panel of Judges for Educator's Award, Delta Kappa Gamma National Headquarters, 804 Littlefield Building, Austin, Texas.

PLANS for the development of the Philadelphia Medical Center at the University of Pennsylvania Medical School and Hospital estimated at $10,000,000 have been made public.

A contribution of $1,000,000 from the Donner Foundation, Inc., is to go toward the construction of a Group Diagnostic Out-Patient Clinic and is contingent upon the University's starting construction of an out-patient building by May, 1949. When completed, the new organization will bring the University's total investment in medical teaching, research, and patient-care to almost $40,000,000.

ACCORDING to the annual study by the John Price Jones Corporation, publicly announced gifts and bequests in eight large cities—New York, Baltimore, Boston, Chicago, Los Angeles, Philadelphia, St. Louis, and Washington—in 1947 amounted to $232,191,962. This is a decrease of 15.8 per cent from the total for 1946. The gifts amounted to a total of $195,033,264, of which $25,996,177 was for education; bequests totaled $37,157,798, of which $15,919,442 was for education.

A GRANT of $45,000 has been made to Ohio State University by the Rockefeller Foundation for a study of executive positions in educational institutions. This study is one phase of the University's Leadership Studies. These studies are interdisciplinary in character, utilizing research methods of anthropology, business organization, economics, education, industrial engineering, psychology, and sociology.

AGREEMENTS have been completed with China and Burma to put the Fulbright Act in operation, and draft agreements are under consideration by the governments of the Philippines, Italy, New Zealand, Greece, Egypt, and Belgium. Twenty-two nations are now eligible and are expected to participate in the plan. It is expected that more than $140,000,000 will be devoted to the program within the next twenty years.

A TWO-YEAR fellowship in Library Service at New Jersey College for Women, Rutgers University, will be offered in September, 1948. It will cover tuition, board, and lodging. The recipient will complete a full professional curriculum in library service, while holding a half-time position in the College library. To qualify, a candidate should have at least a Bachelor's degree, a record of good academic standing, a real interest in libraries and a concept of their value, and preferably some library experience.

THE Educational Testing Service has been organized and chartered by New York State as a non-profit organization to merge the testing activities of the American Council on Education, the College Entrance Examination Board, and the Carnegie Foundation for the Advancement of Teaching. Each of the three agencies will continue to conduct independently its activities other than testing. The units affected by the merger are the Co-operative Test Service, the National Teacher Examination, and the American Council Psychological Examination, of the American Council on Education; the Graduate Record Office of the Carnegie Foundation; and all the testing of the College Entrance Examination Board. The purpose of the new organization is to develop more effective examinations and better intelligence and aptitude tests for use from the first grade to the graduate school, and to conduct

intensive research in new testing methods. President Conant of Harvard, who served as chairman of the special committee appointed by the Carnegie Foundation to study the need for the merger, has been named president of the new organization.

A THREE-YEAR study of present-day revolutions and their effects on relations among nations will be undertaken by Stanford University on a grant of $180,000 from the Carnegie Corporation of New York. The study will attempt to show how the conduct of foreign relations, particularly by the Great Powers, is influenced by revolutionary change. In order to reach this goal, the research group will first examine fundamental changes now taking place in the field of international relations. It will focus upon basic developments in such matters as communications, propaganda, trade and finance, the distribution of military and industrial power, and ideas of security, both personal and national.

An analysis and comparison will also be made of the evidences of revolutionary ferment and upheaval in certain areas. The research group will later attempt to estimate how local revolutions are influenced by the ideologies and policies of the Great Powers, and how the relations among these powers are affected by revolutionary situations in various parts of the world. Specialists in all contributing fields of learning will be called upon to work together.

THE Research Center for Group Dynamics, now at Massachusetts Institute of Technology, will be transferred to the University of Michigan on July 1. It will be associated with the University's Survey Research Center. Group Dynamics' chief function is to learn more about the forces which control human behavior in groups, and to develop a deeper understanding and permit a more intelligent management of human problems. Since its establishment at M.I.T. in 1945, Group Dynamics has conducted research on problems of minority groups, of the loyalty of individuals to groups, and of group conflicts, and also studies on how ideas and attitudes are communicated to various groups.

THE Pennsylvania State College announces six graduate research fellowships in the field of sound–motion picture research. The stipends range from $1,000 to $2,400. Any individual who is ready to undertake research for his doctoral thesis in psychology, education, or related fields on problems of instructional motion-picture production and utilization, problems of perception, learning, and attitudes involving the use of films, is invited to apply for a fellowship. It is expected that a fellow will undertake and complete the research requirements for the doctoral thesis during the year covered by the fellowship award. Interested individuals who already hold the Doctor's degree are also invited to apply for fellowships. The research field under investigation is broad. The instructional Film Research Project, under which the fellowships will be held, has the task of performing research to derive the scientific principles and facts which should be employed in the production and use of sound–motion pictures to achieve maximum effectiveness for rapid "mass" instruction. For information write to C. R. Carpenter.

·Editorial·Comments·

A Working Conference

THE Department of Higher Education of the National Education Association held its third annual meeting at the Congress Hotel, Chicago, March 21 to 25. Among the five hundred fifty registrants were representatives from 380 colleges and universities located in every state but Idaho, Nevada, New Hampshire, and Vermont. Representatives of several agencies of the Federal Government and of twenty-five major national lay organizations were included among the working members of the Conference. On the second day, the "Daily Bulletin" stated that the institutions from which the persons selected to attend the Conference had come enrolled about 90 per cent of the college students in the country, and that among the colleges all types of accrediting agencies were represented. The persons attending the Conference were drawn from the entire range of collegiate positions—professors of all ranks and from all major departments and instructors; deans of all categories, provosts, presidents, chancellors, and other classes of administrative officers.

This was a working conference. The first and last sessions were attended by all participants. During the first session, two addresses were given. These addresses were followed by an explanation of the working plan of the Conference given by Ralph McDonald, executive secretary, Department of Higher Education, National Education Association, who was Director of the Conference.

The program of the Conference was divided into five sections—Finance, Student Personnel, Curriculum and Teaching, Faculty, and Organization. The sections in turn were divided into study groups. There were twenty-two groups within the Conference. The study groups included under the section Curriculum and Teaching were entitled:

Co-ordination of General and Professional Education for Students of Medicine, Law, Engineering, and Similar Professions

General Education in the Arts College

General Education for the Prospective Teacher

Adaptation of Curriculum and Teaching to Contemporary Issues

College Programs of Less than Four Years, with Particular Reference to Post-Secondary Education at the Community Level

Adult and Off-Campus Programs

Each group included from fifteen to thirty members who had been carefully selected to assure a group highly competent to work in the area to which the problems assigned for group study belong. Previous to the Conference, each participant had indicated the topical areas of the agenda in which he was most interested and most proficient. Using these preferences, the central office assigned each individual to a group so that each group included professional leaders from all branches of higher education, all types of institutions, and all sections of the country. Thus the members of a group had in common keen interest in the particular area and had experience with it from

different vantage points and in different professional settings.

The agenda for the use of the study groups were compiled before the Conference met and comprised forty-two pages of questions. These were derived from lists of questions sent to the Department of Higher Education by hundreds of persons who cooperated with the Department in identifying important current issues with which higher education should be concerned. Thousands of suggestions were received. These were classified into related areas under the direction of Mr. McDonald.

The divisions of the agenda were intended to aid in clarifying the working areas for the twenty-two study groups of the Conference. The divisions of the agenda were not entirely discrete, since many major problems were the concern of several or all of the study groups. Each group was asked to appoint an agenda committee "to revise, extend, and refine" the part of the agenda assigned to that group for consideration. This committee was appointed during the first meeting of the group, which followed the first meeting of the section.

Each section had two meetings which were attended by the members of the groups comprising it. The first meeting was held during the second session of the Conference and was addressed by an expert in the area who pointed up the problems in the agenda assigned to that section. During the next to the last session of the Conference, the second meeting of each section was held. At that time, the chairman of each group included within the section summarized the discussion and conclusions of the two-day deliberations of the group. These reports were mimeographed and distributed to all persons attending the final session of the Conference.

At the final session of the Conference, the chairmen of the five sections, in turn, summarized the reports of the groups which comprised each section. The printed proceedings will give, in addition to the papers and reports mentioned here, the detailed report of the discussion of each study group.

This was truly a working conference. The groups met for six hours each day—from nine o'clock to twelve each morning and from two o'clock to five each afternoon, and special committees working on assigned problems used the evening hours to good advantage. Meetings of the study-group chairmen were held during the evening hours by each section chairman so that the work of the study groups within each section was coordinated. There was little of the passing in and out with which one who attends educational meetings is familiar. The members of the group arrived promptly and stayed until dismissed by the chairmen. Everyone was busy and interested.

The techniques used by the Department of Higher Education to ensure individual information and group cooperation were most effective. Mimeographed copies of the addresses given during the first two sessions of the Conference were distributed immediately to all participants. Each person had a copy of the complete agenda. A list of the names of the persons selected to attend the Conference was available the first day. A "Daily Bulletin" of several pages was prepared each day which included announcements of interest to all participants and summarized briefly the

progress of each group's deliberations. The section meetings gave the group members an understanding of their share in the wide areas of interest covered by the section. The first general meeting fanned out the workings of the Conference through the sections to the study groups, while the final general session gathered the efforts of all groups via the sections into a summary which comprehended all. Vice-President Davis of Ohio State University, who was chairman of the study group, "State Finance and Higher Education," says that this conference was the best-organized large meeting he has ever attended.

J. H. M.

Air University Revisited

IN THE October, 1947, issue of the JOURNAL, an editorial was published describing briefly the organization and program of Air University. We are happy to present, elsewhere in this issue, an article by James C. Shelburne, describing in more detail the program and organization of this unusual institution.

The second annual Educational Advisory Staff Conference, held recently, provided the writer with an opportunity to learn more about the institution. His earlier impressions were confirmed. The leaders of the institution continue to emphasize education rather than training. The University continues to take seriously, and to work hard at, the improvement of its educational program.

The situation of Air University differs from that of the typical civilian institution in a number of ways. In the first place, the instructors in its various schools are not professional teachers or scholars but military officers who are usually assigned to the University for a three-year tour of duty. This means that they are less interested in teaching and less skillful in using the techniques of the classroom than the average civilian professor. But it also means that their teaching is less likely to be unrealistic and remote from practical concerns. Moreover, these instructors are more likely to recognize the need of working at, and getting help in, improving their teaching. In the second place, the Air University is teaching in a field, the development and use of air power, that is relatively new and is changing rapidly—at a rate comparable with that of physics rather than that of English literature.

In the third place, all of the students of Air University are pursuing in-service education. They have served from one to twenty years as air officers, the career in which they expect to spend the remainder of their active lives. They are mature and experienced, many of them having served in combat as commanding or staff officers. They are highly motivated.

These conditions—the military experience and the relative lack of teaching experience on the part of instructors, the rapidly changing character of the field, and the experience, maturity, and motivation of the students—are important factors in the development of appropriate instructional materials and procedures. It is important, for example, that printed materials be flexible and be frequently revised. As one group of the consultants in the recent conference pointed out, textbooks must not

[*Continued on page 274*]

··Reviews··

The Biography of Southern College

THE UNIVERSITY OF CHATTANOOGA: SIXTY YEARS, *by Gilbert E. Govan and James W. Livingood.* Chattanooga, Tennessee: University of Chattanooga, 1947. xiv+271 pp. $3.00.

One of many "biographies" of colleges and universities that have appeared in recent years, this is the story of the beginnings and growth of a higher educational institution in the South "dedicated to the service of God and humanity and built on a solid foundation of moral and academic standards," according to the foreword by President David A. Lockmiller who predicts that the institution "will grow and prosper with Chattanooga, ever leading and serving the people of the community and the nation" (page ix). It is the story also of the "dynamic interest in religious, social and educational affairs in the South" taken by the Methodist Episcopal Church (Northern), which had engaged in some religious and educational work among the Negroes during the war of 1861–1865 and "desired that such opportunities be extended to southern whites" (page 9). The result of this interest was a meeting, called by some leaders in that Church and some civic-minded Chattanoogans, at the Pine St. Methodist Church, August, 1872, in the midst of the "tragic era" of reconstruction.

At that meeting, the idea of one central higher educational institution for the white membership of the Methodist Episcopal Church in what was known as "the Central South" seems to have been born. As defined, the region was to include seven conferences of the Church: Holston, Blue Ridge, Alabama, Virginia, Georgia, Kentucky, and Central Tennessee. A recommendation was made to the conferences that an educational convention, to which each conference would send delegates, was to be held. The convention was held in Knoxville, Tennessee, the following September, a paper was presented on the need for an institution for the Methodist Episcopal Church in the South, and resolutions were adopted in favor of a central university. It is interesting to note that, about the same time, Methodists in the central part of Tennessee became interested in the establishment of an educational institution, and out of their efforts grew Vanderbilt University; and out of the interest of the Protestant Episcopal Church in the southern and southwestern states, begun in the late 1850's, grew the University of the South, at Sewanee, Tennessee.

The first part of the present volume deals with Chattanooga University from 1872 to 1889, with major emphasis on efforts to establish the institution, its organizational and administrative history, the vexing issue of racial coeducation, and "student life." The second part deals with the U. S. Grant University from 1889 to 1904 and tells of the consolidation of Chattanooga University with Grant Memorial University at Athens, Tennessee, and the re-establishment of the liberal-arts college at Chattanooga at the latter date. The third part of the book deals with the "modern college" from 1904 to 1946, and the final part with social life in the institution from 1904 to 1946.

The question whether coeducation of the races in the institution should be provided was very vexatious, as in many other places in the South at that time, and the General Conference seems to have taken an equivocal position on the question. In May, 1884, it

> approved in principle the idea that the institution to be established in Chattanooga should be for whites, but a few days later it reiterated its position that no one should be excluded from its churches or schools "for reasons of race, color or previous condition of servitude" (page 37).

Among the lively spots in the book is

the discussion of the initial statement of Alexander Guerry, who in 1929 became the seventh president of the institution. His terse statement dealt with "athletics, commons and paints"; the young president's intention to resist the pressure, everywhere heavy, at, before, and since that time, to relax standards in the interest of winning teams; to make better provision for "lunches and refreshments" for the students, many of whom were day students; and to accomplish "a general clean-up of the campus," which was badly treated by smoke and soot from near-by factories (page 147). These were brave words for a young president, "neither a Methodist nor a clergyman." Brave also was his "discarding the old system of checking chapel attendance" (page 149) and some other innovations which this young Episcopalian introduced. All of this recalls a comment of Jim McConaughy, then president of Wesleyan University in Connecticut, that a college president "often stands or falls in his handling of two problems—chapel and food."

One of the most heartening notes in the book is the expression of President Lockmiller's belief that the institution "will continue its long-established policy of thoroughness in liberal arts and science as opposed to bigness," but he hastens to add the expectation of wide expansion of the university "with the passing of time" (page ix). The authors themselves, fully recognizing what Uncle Sam's windfall has done for colleges and universities, assert that Chattanooga

> along with its sister institutions has accepted the challenge of the new circumstances, with a minimum of expediency. In the best traditions of the liberal arts, it has attempted to hold to universal academic values and its own historical principles (page xi)

and aspires to do so even as it nowadays tries to become adjusted to an unprecedented situation. If this promise of the University of Chattanooga can be kept, that institution can teach a lesson and point a moral to its brother as well as to its "sister" institutions throughout this country.

EDGAR W. KNIGHT
University of North Carolina

Brief Synoptic Sketches

INTRODUCTION TO CONTEMPORARY CIVILIZATION IN THE WEST: A SOURCE BOOK, *prepared by the Contemporary Civilization Staff of Columbia College, Columbia University*. New York: Columbia University Press, 1946. Volume I, viii+1,100 pp. $5.00. Volume II, viii+1,188 pp. $5.00. *Manual* for Volume I, 154 pp.; for Volume II, 163 pp., $1.00 each.

It is a prominent idea of higher education today that time is too short for very much to be accomplished without minute concentration, but that something more, not breadth or catholicity, certainly, but what only amounts to spread or even veneer, ought to be applied at some stage. Concentration is therefore uppermost. But this cannot be owing to any educational principle, surely, in as much as education *per se* is divergent, not convergent, or at least not particularistic. We find concentration itself subordinated to technology, trade, ambitiousness of special disciplines and branches, and simple inertia. The waste of time which it permits without question, and which is immense, contradicts the presumption that time is too short for education. A host of white-collar mechanics who bear the title of chemist, biologist, physician, and even mathematician or linguist, display the result of concentration: continuous and discreet silence whenever matters outside their "fields," though not outside the field of educated minds, are in question; or if not silence, then, the chances are, unenlightened bias.

One could not call the immense work we have here a veneer only, and in fact its compilers intend it to be a foundation to "more advanced courses in the social sciences" (page v) at Columbia College. It reaches from Aristotle to the United Nations, in two ways—one, excerpts from renowned writings; the other, a supplementary mimeographed two-volume manual of about three hundred pages, styled "continuity." The excerpts acquaint the reader with many matters, classified as medieval heritage, politics, morals, science, economics, enlightenment, romanticism, reform, revolution, capitalism, and indus-

trialization. If the young scholar can hold much of this miscellany in his mind, he will be informed concerning the provisions of monarchs and monks for keeping their larders filled (down to the number of geese and chickens); the pretended justifications (as of Aquinas and Boniface VIII) for "denying" non-papists salvation or putting them to death; the social polish of Castiglione; the urbanity of Erasmus; the philosophy and science of Descartes and Newton and many others; Andrew Carnegie's reflections on wealth; doctrines of Marx, Lenin, Mussolini, and a great many other thinkers and men of action. Perhaps he will notice especially a section headed "Early Twentieth Century Currents of Thought," in four parts: physics, Freud, Santayana, Unamuno; and later on, if his education has prospered, he must wonder that, in a work like this, the currents should have been so few, or just these. Seeing, too, that the compilers announce the intention of showing the distinctive American contribution to civilization, he may be surprised that so little that is American (just above fifty pages) is included.

The pedagogical idea of an omnibus is puzzling. Is it impressionism, the idea that a great number of glimpses gives learning? Or is there no theory in it but only a complex of businesslike motives, such as bigger and briefer, quicker and easier, all in none? Little wonder that "continuity" has to be provided additionally.

How do we know that these clippings are the aptest for showing the constitution of our civilization? They show a great deal about the past, but is it assumed that all of that touches us? For instance, that St. Augustine's depiction of "the city of God" does so (while nothing in the Bible does)? It may be regrettable, but the view of the city of Zenith given in Mr. Sinclair Lewis' *Babbitt* is doubtless much closer home, likewise that of the well-known *Middletown*, by Mr. and Mrs. Robert S. Lynd. A tacit philosophy of history is at work in this compilation, or else a tacit philosophy of science; the first, if it is supposed that our civilization is a product of all that is set forth here; the second, if the intent is only propaedeutical. If the first, we must suppose that instead of ever spending themselves, historical forces are cumulative or else evolutionary; and if that is our premise, it will be advantageous to make it known and to state the justification of it, which is not done here. A "source book" of history need not, perhaps, be held so strictly to account, but a book that presumes the present to be the product of all that is included in these volumes, is under special obligation to explain.

If, on the other hand, the purpose is just that of preparing for the study of social science, there arises the question of aptness to the purpose. Suppose there is indeed science, other than common sense, in the studies called social science; had not the youth better study methodology, or applied logic, in order to learn this? Or suppose the main thing is not so much science as it is history of civilization. Then, of course, it is the history of civilization that should be studied. Columbia College is a liberal-arts college, but all of its Freshmen must take a course called "Contemporary Civilization," the materials of which include these volumes. Presumably, a liberal-arts curriculum, especially in a college of this one's high standing, requires much history and science, as well as philosophy and literature. If so, the purpose of a course like the one in question is in due time fulfilled without such a course; and if it is not fulfilled, the trouble must evidently be sought in the history, science, and other courses themselves. Nevertheless, Columbia has had its "Contemporary Civilization" course for twenty-five years. Perhaps it is just the thing for busy New Yorkers, who, I suppose, have not time to think about the paradoxes in it.

For persons not going to college but wishing to have brief synoptic sketches of history or choice tokens of great writings, these volumes would be extremely valuable, in spite of their curious lack of an index and even a table of contents in the case of the manual. Some parts have been translated into English for the first time.

PETER A. CARMICHAEL
Louisiana State University

Generally Conservative

GRADUATE WORK IN THE SOUTH, *by Mary Bynum Pierson.* Chapel Hill, North Carolina: University of North Carolina Press, 1947. xii+265 pp. $4.00.

This book is well organized, well documented, and properly informative. The historic and cultural unity of the South is accepted as a basis for the study, but is not overstressed. As Mrs. Pierson shows, graduate work in the South had made some progress before the Civil War, but has had its most significant development since 1925. Among the important influences in this progress have been the concern of educational bodies such as the Southern Association of Colleges and Secondary Schools, the generosity of the great foundations, the rise of university presses, and the establishment of research organizations. Of the forty-one institutions offering graduate work, seven are studied in detail: Virginia, North Carolina, Duke, Vanderbilt, Georgia, Peabody, and Texas. The final chapter shows the real progress southern universities have made, and lists also the limitations still hampering southern scholarship. These are the familiar ones of inadequate library resources, inadequate support for research and publication, too heavy teaching loads and too few productive scholars. It is significant that of the thirty-four members of the Association of American Universities, only four are in the region covered by this study.

On the whole, southern graduate schools have been conservative rather than experimental. As the statistical tables show, the South has been fairly free from mass production in graduate work. Conservatism may be native to the region, but something is also due to the Conference of Deans of Southern Graduate Schools. This Conference, a pioneer in the field (it began in 1927), adopted in 1935 a set of minimum standards for the Master's degree. In 1946, too late for inclusion in this study, the Conference adopted a set of standards for the Ph.D. These standards have resulted in a south-wide movement for accreditation of graduate schools, a movement which presents very interesting possibilities nationally as well as regionally.

In the fourth chapter, Graduate and Professional Work for Negroes, a major problem in southern education, is discussed. The Gaines Decision of the United States Supreme Court (1938) asserted that states which have dual systems of education must provide substantially equal facilities for each race. In spite of recent improvements, the facilities for Negroes on the secondary-school and college levels are still far from equal to those for the white race. On the graduate level, the facilities for Negroes are very meager, and the cost of equalizing them is prohibitive. Hence the recommendation that regional graduate schools be developed "in which fields of special interest may be emphasized," made by the Conference of Deans of Southern Graduate Schools, deserves careful study. This may be the best way to improve both the Negro and the white graduate schools.

ROGER P. MCCUTCHEON
Tulane University

The First State University

THE CHRONICLES OF THE SESQUICENTENNIAL, *edited by Louis R. Wilson.* Chapel Hill, North Carolina: University of North Carolina Press, 1947. viii+349 pp. $4.00.

Scholarship, research, drama, and pageantry have vied in making historic contributions in the celebrations that mark the foundation of our universities. Most notable of these events was the Harvard Tercentenary. Comparable in a large degree was the more recent Princeton Bicentennial.

Among public institutions, none has produced a more elaborate and significant series of events than the Sesquicentennial celebration of the University of North Carolina. Five of the historic occasions connected with the opening of the University were re-enacted in pageant and play, starting with the commemoration of the granting of the charter of the University by the General Assembly at Fayetteville, December 11, 1789, followed by the laying of the cornerstone of the

"Old East" building, said to be the first building ever erected on a state university campus, October 12, 1793; the formal opening of the University, January 15, 1795; the matriculation of the first student, Hinton James, a month later; and the first commencement, July 13, 1795.

Added to the historic celebrations were notable publications, exhibits, and addresses by distinguished scholars and statesmen; a conference devoted to research and regional welfare; and other affairs pertinent to the progress of learning. The climax was a Sesquicentennial Convocation thronged with visiting delegates from many universities and colleges and learned societies, at which thirty-nine honorary degrees were conferred upon distinguished persons from all parts of the country, including the Secretary of State, Mr. Byrnes.

The whole series of events accentuated the origin, the epochs of progress, and the unique traditions of the University of North Carolina, which was really a child of the American Revolution and the first state university to open its doors, though the University of Georgia had been previously chartered.

The major portion of the celebration was coincident with the recent World War and, though hampered in its progress and unity by this fact, much of it was enhanced in solemnity and fervor because of the global conflict.

The addresses were directed at dynamic issues confronting universities today, some of the most significant of which stem from the war. The speakers included Presidents Conant of Harvard, Dodds of Princeton, Day of Cornell, Dykstra, then of Wisconsin, now of California, and, of course, President Graham of North Carolina, who gave "A Look Ahead" at the final Convocation.

The University of North Carolina and the state are linked with the progress of culture and education in the nation, not simply in priorities of time, but in liberal policies. No more fervent and forward-looking educational crusade ever occurred anywhere than under Governor Charles Aycock, of North Carolina, who died making an educational appeal. No greater galaxy of educational leaders could be cited than those who led the great awakening of that day. The roll cannot be called here but it included: Edwin A. Alderman, president of three universities and unsurpassed in his passionate eloquence in the cause of learning; Charles D. McIver, a great educational evangel and first president of the North Carolina College for Women; James Y. Joyner, state superintendent of public instruction and classmate of Governor Aycock; Edward K. Graham, the first of two great presidents of the University of North Carolina from the same family; and Philander P. Claxton, who held every educational position from teacher in a rural school to Federal Commissioner of Education.

Louis R. Wilson, the editor of the volume, *The Chronicles of the Sesquicentennial*, is well known for his contributions as librarian of the University of North Carolina and director of extension there before going to the University of Chicago as dean of the Graduate Library School. Both as editor of this volume and director of the Sesquicentennial, Mr. Wilson has added lustre to his already numerous contributions to American education.

JOHN J. TIGERT
Emeritus, University of Florida

Education at Amherst

[*Continued from page 232*]

complex and rapidly changing society. At the least, the ablest and most gifted members of each generation must be given the opportunity to develop the kind of quality of interests which will enable them to understand how their specific functions as businessmen, teachers, artists, lawyers, physicians, engineers, etc., fit into the whole complex shifting pattern of our society. Without that there can be no intelligent organization and leadership. It is the function of a liberal education to meet this need, and it is its failure or success in

achieving this purpose that will determine the worth of Amherst's new program. [Vol. XIX, No. 5]

On Simplicity in Thinking

WARREN STAEBLER

[*Continued from page 243*]

deplorable state of mind because it makes people want, and believe they are going to get, something for nothing. The something-for-nothing state of mind is the direct cause of inflation. During a war, a government gets things made; it pays heavily for them and then throws them away. Munitions by the tons, and weapons, mobile instruments, by the tens of thousands, are manufactured at a cost of billions of dollars only to be destroyed. Workers get money for objects which soon cease to exist—something for nothing. The government destines all that it buys to annihilation; something to nothing. If ever a house is built on sands, it is the psychological house inhabited by a nation during a war. Cunning, greed, and rapacity are aggravated and encouraged by almost every patriotic stimulus. Even passive folk, who have no part in the making or destroying of war materials, expect something for nothing; they have been assured by their government that after the lapse of so much time, every three dollars they invested in war bonds will magically turn into four.

Inflation, then, following war, is inevitable, as inevitable as juvenile delinquency. No legislative measures, no matter how many hundreds they number, can right wrongs inhering in an economic and political system or in the psychology of a whole people. After you have plied a child with food and exhorted him to eat to the point of distention, it is preposterous, when he complains of pain, to admonish and threaten him. He must be purged now and prevented from overeating again. In short, war is the evil, and it is war which must be avoided. Tragically simple; tragically difficult. With our blindness to the lessons of the past, our indifference to the plight of the rest of the world, and our childish love of luxury and the display of tribal might, we are not going to avoid it. Yet, in spite of all this, I heard a learned pseudo-simplifier, a scholar of the Renaissance, declare several months ago that the remedy for inflation was simple: since the whole trouble arose from a disproportion between goods and currency, the government had only to release and put into circulation its great stores of gold buried in the earth at Fort Knox and elsewhere; then balance would be restored between materials and money, prosperity would ensue, and (presumably) we would dwell in the house of the Lord forever. *Sancta simplicitas!*

[Vol. XIX, No. 5]

Air University Revisited

[*Continued from page 268*]

become bibles. Instructors must work unusually hard at developing teaching skills and must utilize all the help that is available. Above all, ways must be found to utilize as instructional material the wealth of experience possessed not only by the instructors but by the students.

Air University has a job of great importance and, everything considered, a highly favorable situation in which to work. Great things, therefore, should be expected from it.

R. H. E.